

Submittal Review **VAPA Dialysis Renovation**

Page 1 of 1

Submittal Number: **040**

Date Recd: 4/25/2014

Specifications Sections: 09 65 13 - - -

Subcontractor:

Submittal Type: - - -

Description: Flooring Base

☒ **1. Reviewed/No Exceptions Taken (UON)**☐ **2. Make Corrections Noted (Resubmittal Not Required)**☐ **3. Revise as Noted and Resubmit**☐ **4. Incomplete Submittal, Submit Missing Information**☐ **5. Rejected, Resubmit as Specified**☐ **6. Retained for A/E/Owner Record Only, without A/E Review****Other Comments**

Traditional & Perceptions™ Wall Base

1. PROPRIETARY PRODUCT/MANUFACTURER

1.1. Proprietary Product: Thermoset Rubber Wall Base

1.2. Manufacturer:

Johnsonite, Inc.	Phone	(800) 899-8916
16910 Munn Road		(440) 543-8916
Chagrin Falls, Ohio 44023	Tech:	Ext 9297
Web: www.johnsonite.com	Samples:	Ext 9299
Email: info@johnsonite.com	Fax:	(440) 543-8920

1.3. Proprietary Product Description:

1.3.1. Construction: Johnsonite Traditional Wall Base is manufactured from a proprietary rubber formulation designed specifically to meet the performance and dimensional requirements of ASTM F-1861, Type TV and TP, Group 1 (solid), Style A and B, Standard Specification for Resilient Wall Base.

1.3.2. Physical Characteristics:

Rubber Wall Base

- **Traditional:** DC-XX with toe (coved) or DCT-XX for toeless (straight), 0.125" (3.17 mm) thickness, 2-1/2" (6.35 cm), 4" (10.16 cm), 4 1/2" (11.4 cm) or 6" (15.24 cm) height

Available in 4' (1.22 m) straight lengths and 120' (36.58 m) coiled lengths. The 6" (15.24 cm) high profile available in 4' (1.22 m) straight lengths and 100' (30.48 m) coiled lengths

- **Wall Art:** WA-XX w/toe (coved), 0.125" (3.17 mm) thickness, 4" (10.16 cm) height

Available in 4' (1.22 m) straight lengths only

- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

Vinyl Wall Base

- **Traditional:** CB-XX with toe (coved) or CBT-XX toeless (straight), 0.125" (3.17 mm) or 0.080" thickness, 2-1/2" (6.35 cm), 4" (10.16 cm), or 6" (15.24 cm) height

Cartons size: Available in 4' (1.22 m) straight lengths and 120' (36.58 m) coiled lengths. The 6" (15.24 cm) high profile available in 4' (1.22 m) straight lengths and 100' (30.48 m) coiled lengths

- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

Perceptions™ Rubber Wall Base

- **Recess** (RWDC with angled toe or RWDCT for straight: 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, available in 120' (36.58 m) coiled lengths (or special order 4' straight lengths)
- **Spire** (RWDC-XX-A with toe): 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, 120' (36.58 m) coiled lengths (or special order 4' straight lengths).
- **Quad** (RWDC-XX-C with toe): 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, 120' (36.58 m) coiled lengths (or special order 4' straight lengths)
- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

2. PRODUCT PERFORMANCE AND TECHNICAL DATA

- Meets or exceeds the performance requirements for resistance to heat/light aging, chemicals, and dimensional stability when tested to the methods, as described, in ASTM F-1861.
- **Flexibility:** Will not crack, break, or show any signs of fatigue when bent around a 1/4" (6.4 mm) diameter cylinder.
- **Chemical resistance** (ASTM F 925): Passes – 5% acetic acid, 70% isopropyl alcohol, mineral oil, 5% sodium hydroxide solution, 5% hydrochloric acid solution, 5% sulfuric acid solution, 5% household ammonia solution, and 5.25% household bleach solution
- **Resistance to light** (ASTM F 1515): $\Delta E < 8$
- **Fire Resistance:**

Vinyl Wall Base

ASTM E 84/NFPA 255 (Flame/Smoke) – Class B, < 450
ASTM E 648 (NFPA 253): Critical Radiant Flux – Class I

Rubber Wall Base

ASTM E 84/NFPA 255 (Flame/Smoke) – Class A, < 450
ASTM E 648 (NFPA 253): Critical Radiant Flux – Class I

3. INSTALLATION

Johnsonite Wall Base and adhesives must be site conditioned at room temperature for a minimum of 48 hours prior to, during, and after installation. Room temperature must be maintained between 65° and 85°F (18° and 30°C) with HVAC system operating. A minimum temperature of 55°F (13°C) must be maintained afterwards. The ambient relative humidity should be between 40% and 60%.

All walls must be clean, smooth, flat and dry. The surface must be free of all dust, loose particles, solvents, paint,

Traditional & Perceptions™ Wall Base

grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect installation. Remove existing adhesive mechanically – do not use chemical adhesive removers or solvents. Fill all depressions, cracks, and other surface irregularities with a good quality patching compound.

Caution: Do not use liquid solvents or adhesive removers.

Do not install Johnsonite BaseWorks Wall Base over vinyl wall coverings.

Do not install Johnsonite Wall Base over non-porous surfaces with Johnsonite 960 Wall Base Adhesive. For non-porous surfaces apply Johnsonite 946 Premium Contact Adhesive.

For current Installation and Maintenance Instructions, Product Specifications, and other technical data, visit us on the web at www.johnsonite.com or contact Johnsonite at 800-899-8916.

3.1. Adhesives:

960 Cove Base Adhesive (porous surfaces)

Approximate coverage:

2 ½" high – 300 to 350 linear feet/gallon

4" high – 200 to 250 linear feet/gallon

6" high – 100 to 150 linear feet/gallon

946 Premium Contact Adhesive (non-porous surfaces)

Application: Brush or roller

Approximate coverage:

1 kg Unit (0.95 Qt) – 24 to 36 sq. ft. per unit

6 kg Unit (1.44 Gal.) – 144 to 215 sq. ft. per unit

3.2. Installation Manual: Refer to Johnsonite Wall Base Installation Instructions for complete installation details.

4. AVAILABILITY AND COST

Available through authorized Johnsonite distributors nationwide.

5. WARRANTY

Limited 2 year warranty. For complete details, contact Johnsonite or an authorized Johnsonite distributor.

6. MAINTENANCE

Refer to Johnsonite Wall Base Installation Instructions for complete maintenance details.

7. TECHNICAL SERVICES

Samples: Submittal samples for verification and approval available upon request from Johnsonite. Samples shall be submitted in compliance with the requirements of the Contract Documents. Accepted and approved samples shall constitute the standard materials which represent materials installed on the project.



RESILIENT WALL BASE

Installation and Maintenance Instructions



THE ULTIMATE
FLOORING EXPERIENCE

Cove and Toeless Profiles

Handling and Storage

1. Johnsonite Resilient Wall Base and adhesives must be site conditioned at room temperature for 48 hours prior to, during, and after installation. Room temperature must be maintained between 65°F and 85°F (18° and 30°C) with HVAC system operating. A minimum temperature of 55°F (13°C) must be maintained afterwards. The ambient relative humidity should be between 40% and 60%.
2. Care must be taken not to pull the wall base excessively when removing it from the carton or unrolling the coils. **The wall base will not shrink, but it will relax to its original length, if stretched.**
3. In areas that are exposed to intense or direct sunlight, the product must be protected during the conditioning, installation, and adhesive curing periods, by covering the light source.
4. The highest quality of materials and workmanship is employed in the manufacture of Johnsonite Flooring and careful inspection is made before shipment. However, a quality installation is the responsibility of the installer. It is the installer's responsibility to verify the

accuracy of the order and to ensure the materials are checked for damage, defects, and satisfactory color match. An authorized Johnsonite distributor or Johnsonite representative must be notified of any defects before installation proceeds.

5. Johnsonite cannot accept responsibility for any loss or damage that may result from the use of this information, due to processing or working conditions and/or workmanship outside our control. Users are advised to confirm the suitability of this product by their own tests.

General Surface Preparation

1. **All walls** must be clean, smooth, flat and dry. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect installation. Remove existing adhesive mechanically – do not use chemical adhesive removers or solvents. Fill all depressions, cracks, and other surface irregularities with a good quality patching compound.

NOTE: Contamination on the substrate can cause damage to the resilient wall base material. Permanent and non-permanent markers, pens, crayons, paint, etc., must not be used to write on the back of the wall base material or used to mark

the substrate as they could bleed through and stain the wall base material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the resilient wall base material.

Caution: Do not use liquid solvents or adhesive removers.

2. Do not install Johnsonite Resilient Wall Base over vinyl wallcoverings.
3. Do not install Johnsonite Resilient Wall Base over non-porous surfaces with Johnsonite 960 Wall Base Adhesive. Utilize Johnsonite 946 Premium Contact Adhesive following the non-porous application instructions for all non-porous surface

installations.

4. Never install Johnsonite Resilient Wall Base on surfaces that will be exposed to drastic temperature changes or moisture.
5. **Terrazzo and Ceramic wall** surfaces must be thoroughly sanded to remove all glaze and waxes. Remove or replace all loose tiles and clean the grout lines. Use a Portland cement based leveling compound to fill all grout lines and other depressions.
6. **Steel wall** surfaces must be mechanically abraded to assist with the adhesive bond. The wall must be cleaned to remove all dirt, rust and other contaminants. When applying adhesive the non-porous installation instructions must be followed.

Resilient Wall Base Installation

1. Recommended Adhesives:

- a. Porous Surfaces **ONLY:**
Johnsonite 960 Wall Base Adhesive
Trowel: 1/8" x 1/8" x 1/8" 'SQ' notch
- b. Non-Porous Surface:
Johnsonite 946 Premium Contact Adhesive
Apply adhesive with a Brush or Short Nap Roller

Caution: Allow the adhesive to dry to the touch with no transfer to the finger. Once the adhesive reaches the "dry-to-touch" state, the wall base must be installed within 45 minutes and immediately rolled.

2. Installation Procedures:

- a. Allow coiled wall base to lay flat for at least 24 hours, between 65° and 85°F

(18° and 30°C) with HVAC system operating, prior to installation.

- b. For installations on **porous wall surfaces**, apply Johnsonite 960 Wall Base Adhesive to the ribbed surface (back) of the wall base with a 1/8" square-notched trowel. **The adhesive should cover 80% of the back surface.** Leave a 1/4" (6.35mm) uncovered space at the top of the wall base to prevent the adhesive from oozing onto the wall above the base when installed.
- c. For installations on **non-porous wall surfaces** (i.e.: metal, epoxy paint, ceramics, etc.) apply Johnsonite 946 Premium Contact Adhesive to both the wall surface and the back of the wall base. Allow adhesive to thoroughly dry to the touch.

Carefully position the wall base on the wall surface.

Note: Once contact is made to the wall surface, the wall base cannot be moved.

- d. Position wall base on wall surface and roll with hand roller. **Always roll back to starting point to prevent stretching the wall base.**

3. Clean-up

- a. Use a clean white cloth dampened with water to remove wet adhesive from wall base, substrate, floor covering and tools.
- b. Dried adhesive may require the use of denatured alcohol applied to a clean white cloth. (Follow manufacturer's precautions when using denatured alcohol.)

Corner Installation

1. Factory Made Corners

- a. **Install factory made corners before installing wall base.**
- b. Trowel adhesive to ribbed back of wall base corner.
- c. Position corner in place and roll to ensure proper adhesive bond.
- d. Attention should be given to a tight and even fit to the corner.

Note: Johnsonite 946 Premium Contact Adhesive may be used to ensure a faster setup at the corner.

2. Field-Made Inside Corners

- a. Install wall base and terminate into the corner.
- b. Position another piece of wall base on opposing wall, without adhesive, approximately 1" from the installed piece.

- c. Utilize dividers; place one pin at the top of the installed piece and one pin at the top of the uninstalled piece. Carefully, move the dividers downward in a straight vertical motion, allowing the pin of the dividers to follow the profile of the installed piece. At the same time, place adequate pressure on the pin to transfer and/or scribe the profile onto the surface of the uninstalled piece.
- d. Use a utility knife to cut the scribe line on the uninstalled wall base, apply adhesive, and position the trimmed section into place.

3. Field-Made Outside Corners

- a. Stop application of adhesive to wall base approximately 18" (45cm) from the outside corner of the wall.

- b. Position the wall base at the corner and pencil line the back of the wall base where the bend is required.
- c. Lay the wall base on the floor with the back up. Utilizing a top-set or pull-type gouge tool, make a shallow notch along the pencil line.

Note: The notch depth should not exceed one-quarter the total thickness of the wall base.

- d. Reposition the wall base corner on the wall. The corner of the wall should fit snugly into the notched recess on the back of the wall base.
- e. Apply adhesive and roll firmly into place.

Note: Johnsonite 946 Premium Contact Adhesive may be used to ensure a faster setup at the corner.

Adhesive Clean Up

Excess adhesive should be removed during the installation process

960 Wall Base Adhesive

- ◆ Use a clean white cloth dampened with water to remove wet adhesive from wall base, substrate, floor covering and tools.
- ◆ Dried adhesive may require the use of denatured alcohol applied to a clean white

cloth. (Follow manufacturer's precautions when using denatured alcohol.)

946 Premium Contact Adhesive

- ◆ Use a clean white cloth dampened with water to remove wet adhesive from wall

base, substrate, floor covering and tools.

- ◆ Dried adhesive may require the use of denatured alcohol applied to a clean white cloth. (Follow manufacturer's precautions when using denatured alcohol.)

Maintenance

1. Wait 72 hours after installation before performing initial cleaning.
2. A regular maintenance program must be started after the initial cleaning.
3. Johnsonite Resilient Wall Base is

maintained with regular wiping using a wet, clean, soft, white cloth.

4. A mild detergent may be added to the water.
5. Coarse scrubbing media or harsh cleaning

chemicals may damage the surface of the wall base.

For further questions please contact Johnsonite Technical Services Department at 1-800-899-8916.



Johnsonite

A Tarkett Company

THE ULTIMATE
FLOORING EXPERIENCE

Technical Services Department
16910 Munn Road, Chagrin Falls, Ohio 44023
(800) 899-8916 ext 9297 Fax (440) 632-5643
www.johnsonite.com
email: info@johnsonite.com
© 2012 Johnsonite Inc.

Limited Warranty

JOHNSONITE WARRANTY OVERVIEW

Johnsonite is pleased to offer the world's most-integrated, high-performance flooring system, bringing together design, function and life-safety, leading to enhanced productivity in high-performance environments. All Johnsonite products are warranted against manufacturers' defects to ensure high standards of quality, performance and aesthetics.

LIMITED WARRANTY INFORMATION

Section 1: Rubber Sheet Flooring

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that rubber sheet flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-5).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 2: Compression Molded Rubber Tile

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that molded rubber tile flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-5).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

SECTION	PRODUCT TYPE	PRODUCT LINES
1	Rubber Sheet Flooring	Arcade; Replay® Rolls
2	Compression Molded Rubber Tile	MicroTone®; Circulinity®; Mesto®; Mesto Configurations®; Metallurgy®; Eco-Shell™ with Cork; CorkTones®; Folio®; Prima® Olío® and Marbleized; Triumph and Inertia®; Replay® Tiles; SlideLock®; Defiant™ Oil- and Grease-Resistant; Terra-Turf®
3	Rubber or Vinyl Stair Treads	Rubber or Vinyl Stair Treads
4	Finishing Borders (Wall Base)	Millwork®; Masquerade®; Wall Art®; Ecolibrium®; BaseWorks®; Traditional; Perceptions®; TightLock®; rePLACE®; Finishing Accessories
5	Vinyl Sheet Flooring	iQ™ Optima® (All Collections); iQ™ Granit™ (All Collections); iQ™ Natural; Melodia®; Aria®; Contract Plus; Acczent® (All Collections); Marbled Safe-T; Ruby; Training®; iQ™ Granit™ SD, iQ™ Toro SC
6	Vinyl Tile Flooring	Cortina Grande™ Solid Vinyl Tile; Color Essence™ Vinyl Enhanced Tile; Azterra™ Vinyl Enhanced Tile
7	Linoleum Sheet and Tile Flooring	Harmonium xf™ (All Collections)
8	Luxury Tile and Plank	I.D. Inspiration®, I.D. Freedom®, Space™ Modular Tile
9	Luxury Tile and Plank (Light Commercial)	I.D. Patriot™
10	Vinyl Composition Tile and Plank	Azrock® VCT; Azrock® TexTile™ VCT

Section 3: Rubber or Vinyl Stair Treads

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that rubber or vinyl stair tread products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-5).

Section 4: Finishing Borders (Wall Base)

Limited 2-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of two (2) years of Commercial use that rubber or vinyl wall base products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2).

Section 5: Vinyl Sheet Flooring

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that vinyl sheet flooring products

conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-5).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 6: Vinyl Tile Flooring

Limited 10-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of ten (10) years of Commercial use that vinyl tile flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-10).

Johnsonite warrants that the products will not wear through for the warranty period of ten (10) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 7: Linoleum Sheet and Tile Flooring

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that linoleum sheet and tile flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-5).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 8: Luxury Tile and Plank

Limited 10-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of ten (10) years of Commercial use that luxury tile and plank flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-10).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 9: Luxury Tile and Plank (Light Commercial)

Limited 10-Year Light Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of ten (10) years of Light Commercial use that luxury tile and plank flooring products conform to written specifications

and are free of manufacturing defects, subject to the terms and conditions specified herein. Light Commercial applications are defined as foot-traffic-only (no rolling loads).

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-10).

Johnsonite warrants that the products will not wear through for the warranty period of ten (10) years of Light Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

Section 10: Vinyl Composition Tile and Plank

Limited 5-Year Commercial Warranty for Manufacturing Defects: Johnsonite warrants from the date of purchase for a period of five (5) years of Commercial use that vinyl composition tile and plank flooring products conform to written specifications and are free of manufacturing defects, subject to the terms and conditions specified herein.

The customer must notify Johnsonite of any obvious visual defects prior to installation; otherwise this warranty will not apply. If the defect is found and Johnsonite is notified in writing prior to installation, Johnsonite will replace any defective product, at no charge. If the customer believes the product to be defective after installation, the customer must promptly notify Johnsonite and permit an inspection of the product. If, upon inspection, Johnsonite determines that the product is defective, Johnsonite will replace or repair the defective product at its own cost, subject to the limitations in this warranty, and prorated as follows: Material and 100% Reasonable Labor Costs (Year 1); Material and 50% Reasonable Labor Costs (Year 2); and Material Only (Years 3-10).

Johnsonite warrants that the products will not wear through for the warranty period of five (5) years of Commercial use. For claims based on wear-through, the customer must notify Johnsonite and permit an inspection of the flooring. If Johnsonite determines that the original flooring is worn through, Johnsonite will replace or repair the worn flooring at its own cost; however, labor costs will be the customer's responsibility except as provided on the prorated basis described in the prior paragraph.

All Johnsonite Commercial Products:

This Limited Warranty applies only for products installed, used and maintained according to the written recommendations and specifications provided by at the time of material purchase.

Warranty Claim Procedure

To be eligible for replacement under this warranty, the customer must file a claim by giving Johnsonite written notice of the defect. This notice must be filed immediately, but in no event more than 10 days following discovery of the defect. Notice shall be given to Johnsonite at its corporate address of 16910 Munn Road, Chagrin Falls, Ohio 44023. Phone: (800) 899-8916; Fax: (440) 543-5774.

If defective product has been discontinued or is otherwise unavailable, Johnsonite reserves the right to select and supply the customer with Johnsonite replacement flooring, similar in quality and quantity to the material claimed to be defective.

Warranty Exclusions

The Johnsonite Limited Warranty does not apply to:

- The exact matching of shade, color or mottling
- Any promise made by any salesperson or representative, unless such promise is express and made in a written form
- Tears, burns, cuts or damage due to improper installation or use or improper cleaning agents and maintenance methods
- Labor costs outside of prorated schedule defined in the warranty
- Sales of non-first quality materials, i.e., "seconds," "off goods" or other irregular flooring. Such non-first quality materials are sold "as is."
- Issues associated with the use of adhesives other than those recommended by Johnsonite
- Issues caused by moisture or alkali in the subfloor. Pre-installation moisture and alkali testing is required and must be made available to Johnsonite upon request.
- Subfloor contamination or markings that bleed through the flooring material causing discoloration or staining
- Problems caused by installation, uses and maintenance that are contrary to Johnsonite's specifications, recommendations or instructions
- Material installed with obvious defects not notified to Johnsonite prior to installation
- Exterior installations – Johnsonite products are designed for interior applications only
- Fading and/or discoloration resulting from heavy sunlight penetration and ultraviolet ray exposure from direct or glass-filtered sunlight
- Damage to flooring products caused by high or spiked heels, improper protectors/casters or furniture rests. Some rolling-type casters on furniture or appliances may damage resilient flooring. Warranty as to the suitability of the factory-installed casters rests with the furniture or appliance manufacturers. Casters must be suitable for use on resilient flooring to avoid warranty exclusions.
- Damage to flooring products from pallet jack and tow-motor traffic
- Premature wear or deterioration from spikes and skate blade exposure
- Variations in color or embossing between products, photography or printed color illustrations
- Installation of Johnsonite flooring in work or commercial areas exposed to oil and grease, such as commercial kitchens or butcher shops. Defiant Oil and Grease-Resistant Rubber tiles are recommended in such situations.
- Additional expense associated with overtime, replacing or moving appliances or furniture, business interruptions, loss of use or other related costs associated with the replacement of the flooring

Warranty Disclaimer

JOHNSONITE MAKES NO WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED WITH RESPECT THERETO, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

These warranties are in lieu of any other warranty expressed or implied. Johnsonite shall not be liable for any incidental or consequential damages which may result from a defect or whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory, except where the exclusion or limitation of incidental or consequential damages is prohibited by state law. These warranties provide specific legal rights; these and other rights may vary from state to state. To learn the legal rights in a specific state, consult the local or state Consumer Affairs Office or the State Attorney General.

All of the above is for reference only – for the latest product-specific information regarding warranties, installation and maintenance, please visit tarkettna.com.

Page 1 of 1

Date Recd: 4/25/2014

Subcontractor: _____
 Submittal Type: - - -

Description: Flooring Adhesive and Flooring

- ☒ **1. Reviewed/No Exceptions Taken (UON)**
- ☐ **2. Make Corrections Noted (Resubmittal Not Required)**
- ☐ **3. Revise as Noted and Resubmit**
- ☐ **4. Incomplete Submittal, Submit Missing Information**
- ☐ **5. Rejected, Resubmit as Specified**
- ☐ **6. Retained for A/E/Owner Record Only, without A/E Review**

Other Comments

KAYAR 3,0 mm

Characteristics EN 1817	Standard	Unit	Requirements	Average values from production
Hardness	ISO 7619	shore A	≥ 75	85 ± 5
Residual indentation	EN 433	mm	≤ 0,20	0,08
Abrasion resistance	ISO 4649 (Met. A - 5N)	mm ³	≤ 250	190
Dimensional stability	EN 434	%	± 0,40 max	± 0,30
Flexibility	EN 435 Met. A (Ø 20mm)	-	no fissuring	comply
Colour fastness to artificial light	ISO 105-B02 Met. 3	degre	≥ 6 blue scale ≥ 3 grey scale	comply
Cigarette burn	EN 1399	rating	met. A ≥ 4 met. B ≥ 3	comply
Characteristics EN 14041				
Fire behaviour	EN 13501-1	class	-	B _{fl} - s1
Slip resistance	EN 13893	class	≥ 0,30 (DS)	DS
Other characteristics				
Resistance to stains	EN 423	-	-	resistant *
Ramp slip resistance	DIN 51130	°	BGR 181	≥ 6 (R9)
Thermal resistance	DIN 52612	m ² K/W	-	0,020
Electrical resistance	EN 1081 Met. A	ohm	-	> 10 ¹⁰
Electrostatic charge	EN 1815	kV	-	≤ 2 (antistatic)
Reduction of sound due to treading	ISO 10140-3	dB	-	approx. 10
Castor chairs	EN 425	-	-	suitable for W castors
Environmental characteristics				
Environmental assessment BRE	SD028	-	-	certified
Environmental certification Blue Angel	RAL UZ 120	-	various	certified
VOC emissions	CA Section 01350	-	various	comply
VOC emissions	AgBB	-	various	comply

* depending on concentration and time of contact, for specific agent please ask.



3,0 mm

4,9 kg/m²

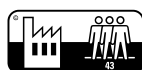
61 x 61 cm



1,90 m



10 m

Classification EN 685:

Technical data are subject to change without notice. Rev. 1/13

12 POLYURETHANE ADHESIVE (PU 105)

12.1 DESCRIPTION

PU 105 is a high performance two-part polyurethane adhesive for both indoor and outdoor installations of Mondo rubber and PVC floor covering. It has excellent resistance to moisture, heat and water, plus outstanding adhesion at low temperatures.

NOTE: PU 105 is the only suitable adhesive when installing over Mondo Everlay.

NOTE: PU 105 is the only suitable adhesive to use when the area installed will be used for free weights/dumbbells.

NOTE: PU 105 is the only recommended adhesive for installing Mondo material over asphalt. Call the Mondo Technical Department for asphalt preparation.

12.2 LIMITATIONS

- 1) Protect from freezing in transit and storage. If frozen, allow it to return to room temperature without stirring.
- 2) **Do not use** when the substrate temperature is below 50°F (10°C) or above 86°F (30°C).
- 3) Concrete floors must be completely cured (28 days minimum) and free from moisture vapor emissions and alkaline conditions. An anhydrous calcium chloride test should not exceed 5 lbs/1,000 ft² (1.36 kg/93 m²) in 24 hours, tested in accordance with ASTM F1869.
- 4) **Do not apply** over gypsum base surfaces.

12.3 SURFACE PREPARATION

All subfloors must be structurally sound, smooth, solid, level, well fastened, dry, clean and free of dust, oil, grease, paint, tar, wax or any deleterious substances which may prevent or reduce adhesion. The subfloor should be inspected and must meet Mondo specifications as described in Section 1 [Subfloor Preparation](#).

12.4 MIXING

Create a mixing station by selecting a location, away from the installation area, and protecting it with a 6' x 6' scrap piece of material, Kraft paper or other suitable product. This polyurethane adhesive consists of two parts and the proportions for the mix are ready to use. Pour the small container of part B in the large pail of part A and stir thoroughly with a **variable speed** mixer (6 amps minimum) until a homogeneous and smooth consistency is obtained. **The complete contents of both parts of the adhesive must be used at once.** Improper mixing may result in a poor bond. Using a variable speed mixer should not take longer than 2 minutes to mix the two parts to a creamy texture. Overmixing will cause the catalyst to set up too fast, thus reducing pot life and entrapping air which may reduce bond performance. **The adhesive has to be applied immediately after mixing, otherwise it will thicken and be much harder to trowel. The flooring must be installed while the adhesive is wet. The mix must be used within 60 minutes.**

12.5 TROWEL SIZE

Trowel size must comply with our recommendations for the product to be installed. See Mondo Installation Manual for details on the recommended trowel or for more information please contact the Mondo Technical Department. Jobsite/substrate conditions will affect spread rate, it may be necessary to adjust trowel size or perform additional surface preparation. **It is recommended to change trowels every so often in order to assure the teeth are not worn out and that the adhesive spread is consistent throughout.**

12.6 APPLICATION

- 1) Refer to the appropriate section of the Mondo Installation Manual for the complete installation procedure of the specified sport or commercial product.
- 2) A bond test should be performed before proceeding with an installation using PU 105 (refer to [Section 1.2.1.6](#)).
- 3) Use the recommended notched trowel with sufficient depth to ensure that at least 90% of the adhesive transfers to the material backing.
- 4) Special care must be taken that the adhesive is not applied too thinly. Because the instant grab of PU 105 is low, grey concrete utility bricks (2" x 4" x 8") should be used to cover every seams when installing Mondo sport products (in some cases, oblong sandbags can be used when installing Mondo commercial flooring) in order to maintain contact between the material and the adhesive until it has fully set. Mondo recommends leaving the weights on the seam for a period of 24 hours. **Please refer to our installation manual for the specific quantity of bricks used for each sport product.**
- 5) **Do not spread more adhesive than can be covered with material within 30 minutes.** (Note: floor and ambient temperatures directly affects setting time: The warmer it gets, the faster it sets).
- 6) **Install the flooring material onto the fresh adhesive.** Proper adhesive transfer to the material backing should be confirmed periodically by lifting the flooring material and inspecting the backing for a minimum 90% transfer.
- 7) Push out air using the recommended method, as described in the specified product's installation procedure.
- 8) Adhesive setting time will depend mainly on the temperature of the substrate, the floor covering, and jobsite conditions. The initial setting time is seven (7) hours at 73°F (23°C) and the final setting time is twenty-four (24) hours at 73°F (23°C).
- 9) Do not walk over a newly laid installation before 24 hours and do not allow heavy or rolling traffic before 72 hours. If needed, protect the installation with 1/8" Masonite or 1/4" plywood.
- 10) **Cleaning or removal of adhesive must be done with denatured alcohol while the adhesive is still wet.**



12.7 PHYSICAL PROPERTIES

Open time at 73°F (23°C)	
50% relative humidity.....	60 min.
Initial setting time at 73°F (23°C).....	7 hours
Final setting time at 73°F (23°C).....	24 hours
Freeze/thaw stability at 0°F (-18°C).....	Stable 5 cycles
Flammability Part A.....	>61 °C (>142°F)
Flammability Part B.....	>87 °C (>187°F)
Maximum tolerance of moisture	
vapor emissions from the concrete slab	
(using the anhydrous calcium chloride test).....	5lbs./1,000ft ² /24 hrs.
Cleaning.....	Denatured alcohol while adhesive is wet
Color.....	White/Cream
Consistency.....	Buttery

Pails: 1.98 US gal. (7.5 L)

Shelf life is approximately 12 months when stored in original containers at room temperature in a dry heated area.

Actual jobsite coverage may vary according to substrate conditions, type of trowel and setting practices.

12.8 PROTECTION

- 1) Provide for heated storage on site and deliver all materials at least 24 hours before work begins.**
- 2) No foot traffic for a minimum of 24 hours after installation and no heavy or rolling loads (wheels, carts, etc.) for a minimum of 72 hours in order to allow proper adhesive set-up and curing. Failure to follow this recommendation can lead to dispersion of adhesive under the flooring prior to proper setting and can result in unwanted air pockets and bubbles.**

NOTE: Refer to material safety data sheets (MSDS) for more information regarding use, application, limitations and safety.

THIS PRODUCT IS NOT CONTROLLED UNDER THE CANADIAN REGULATION WHMIS.

CONTENT: - NJ TNRN 930 – This product does not contain any chemicals reportable under American Federal OSHA 29CFR 1910.1200.

In the event of a chemical emergency, spill, leak, exposure or accident,
in Canada call **CANUTEC 613 996-6666**
in USA call **CHEMTREC 800 424-9300**

KEEP OUT OF THE REACH OF CHILDREN.

NOTICE: We shall not be liable for incidental and consequential damages, as defined under the uniform commercial code, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or



for other than the intended use. Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. Our liability is expressly limited to replacement of defective goods. Any claims shall be deemed waived unless made in writing to use within thirty (30) days from date it was or reasonably should have been discovered.

DISCLAIMER: Refer to page 73 of this document.

WARNING: SHOULD YOU HAVE ANY CONCERNS OR BE UNSURE ABOUT SUBFLOOR CONDITIONS OR INSTALLATION PROCEDURES, PLEASE CALL OUR TECHNICAL DEPARTMENT.

Mondo America Inc., Technical Department, 2655 Francis-Hughes, Laval, QC H7L 3S8
Telephone: (450) 967-5800 • Facsimile: (450) 663-7927 • USA: 800 361-3747 • Canada: 800 663-8138
Email: technical@mondousa.com



MONDO LIMITED WARRANTY – KAYAR

1. Mondo America Inc. ("Mondo") provides this Limited Warranty for its KAYAR rubber flooring ("Specified Product") against manufacturing defects in material for a period of one (1) year and against excessive wear for a period of ten (10) years (excessive wear shall be deemed as the wearing away of the top layer down to the underlayment) from the date of sale. Mondo warrants that in the event of a manufacturing defect or excessive wear in the Specified Product covered by this Limited Warranty, which such Specified Product has been installed and maintained in accordance with the Mondo's specifications, technical specifications and/or technical bulletins, Mondo's sole liability shall be to elect either of the following in Mondo's sole discretion: (a) to repair the Specified Product proven to be subject to the manufacturing defect or excessive wear; or (b) to ship replacement product reasonably equivalent to the Specified Product proven to be subject to the manufacturing defect or excessive wear; or (c) to ship and install over the Specified Product proven to be subject to the manufacturing defect or excessive wear, a product reasonably equivalent to the Specified Product (i.e. flooring overlay). However, in no event shall any manufacturing defect affecting only the aesthetics and not the performance of any Specified Product require Mondo to provide anything other than a reasonable aesthetic resolution.

LIMITATIONS AND DISCLAIMERS

Mondo's liability hereunder shall be limited as specified above, which shall be the sole and exclusive obligation of Mondo hereunder. Under no circumstances will Mondo be liable for labor or any other costs incurred in connection with the repair, removal, installation or replacement of the Specified Product covered by this Limited Warranty, except as specifically provided herein. Under no circumstances will Mondo be liable for direct or indirect damages, labor, removal, installation, incidental or consequential damages, for lost profits, lost sales, injury to property or any other damages, losses or contingencies due to or arising out of the Specified Product, whether or not subject to a manufacturing defect or excessive wear.

The Limited Warranty is valid only for the original end user of regular or first quality Specified Product and is not assignable or transferable under any circumstances. This Limited Warranty is in lieu of all other warranties, expressed or implied, including, but not limited to any warranty of merchantability, habitability or fitness for a particular purpose, and also is in lieu of any other obligations on the part of Mondo (contractual, tort or otherwise).

This Limited Warranty constitutes the only warranty made by Mondo and is a complete and exclusive statement of its obligations. Mondo makes no representations, expressed or implied, not specified herein. Any and all representations, promises, warranties or statements by Mondo's employees, representatives, agents, dealers, or distributors that differ, enhance, amend or extend in any manner from the terms of this written Limited Warranty shall be of no force or effect. No representative, agent or employee of Mondo, or any other person, is authorized to assume for Mondo any additional liability or responsibility with Mondo floor covering except as described above.

2. The repair, replacement, or overlay of the Specified Product proven to have a manufacturing defect or excessive wear shall not be deemed to extend or prolong the period or terms of this Limited Warranty. This Limited Warranty shall be void if the Specified Product has been repaired, replaced or overlaid by persons other than those authorized and approved by Mondo to perform such work.

3. Without limiting the foregoing and subject to the particular type of Specified Product involved, this Limited Warranty shall not cover damage to the Specified Product caused in whole or in part by any of the following: (a) usage for which the Specified Product was not designed; (b) faulty construction of the building and/or sub-base; (c) failure of the other contractors to adhere to their specifications; (d) deficiencies in the concrete or asphalt slab; (e) excessive dryness in the concrete slab; (f) failure to install correctly moisture and/or vapor barriers; or (g) excessive moisture or alkali from humidity, spillage, mechanical failure, migration through the slab or walls, or from any other source.

4. Specifically, excluded from this Limited Warranty is any Specified Product which has been subjected to neglect, abuse, and excess wear in pivoting areas and high stress areas. In addition, this Limited Warranty does not cover damage due to stains, gouges, punctures, tears, accidents, or damage resulting from any intentional misuse of product; luster reduction from use; normal wear and tear, gradual changes in color shading due to exposure to sunlight and/or climatic conditions. Differences in color/shading/flecking and marblization variations with any actual samples, printed illustrations and/or previous productions are also excluded under this Limited Warranty.

5. This Limited Warranty shall not apply to Specified Products which have been discontinued or Specified Products in a discontinued color, marbleization or flecking at the time of sale, or to goods sold as seconds or B grade. This Limited Warranty shall become void if the proper Mondo adhesive or Mondo recommended adhesive has not been used on the installation, if the Specified Product has not been installed by certified Mondo installers, or if the Specified Product has not been maintained in accordance with all of Mondo's specifications.

6. As a condition precedent to any of Mondo's obligations hereunder, the claimant must provide Mondo with written notice within thirty (30) days of the discovery of any alleged defect or excessive wear and supply Mondo with the details concerning the alleged defect or excessive wear. After notification, an authorized Mondo representative shall have the right to inspect and verify the alleged defect or excessive wear. Promptly thereafter, Mondo will, if it determines the Specified Product to be defective or excessively worn, at its option, elect as provided in paragraph 1 above. If shipment of alternative product is elected in accordance with this Limited Warranty, the same product, color and embossing of the Mondo Specified Product will be supplied to the extent then reasonably available. Mondo will make reasonable efforts to match any of its standard colors for such alternative product if, at the required time, such production can be combined with a production run of the same product and color, but Mondo cannot guarantee to match the exact color shading, marbleization, fleck dispersion, or finish of said alternative product with the Specified Product.

7. Receipt and installation of any and all Specified Product constitutes acceptance of this Limited Warranty and all of its terms, conditions, limitations and disclaimers.

END OF WARRANTY R092713

Submittal Number: **063**

Date Recd: 5/5/2014

Specifications Sections: 09 67 23, Resinous Flooring - - -

Subcontractor:

Submittal Type: Product Data/Other - - -

Description: BASF Resinous Flooring

☒ **1. Reviewed/No Exceptions Taken (UON)**

Provide physical color samples for review/selection.

☐ **2. Make Corrections Noted (Resubmittal Not Required)**☐ **3. Revise as Noted and Resubmit**☐ **4. Incomplete Submittal, Submit Missing Information**☐ **5. Rejected, Resubmit as Specified**☐ **6. Retained for A/E/Owner Record Only, without A/E Review**

Other Comments



The Chemical Company

PRODUCT DATA

9 09 67 26

**Seamless Quartz
Flooring**

SELBATWEDE 41

Decorative epoxy floor system

Description

Selbatwede 41 consists of a two-component 100% solids epoxy-resin binder with colored quartz aggregate. Can be used as a binder in slurry/broadcast system. The colored quartz imparts a slip-resistant surface that can be varied by the applicator. It is applied over properly prepared surfaces to a thickness of 1/8" (3 mm) to 3/16" (5 mm).

Yield

First receiving coat: 160 ft²/gallon (4 m²/L)

Second receiving coat: 100 ft²/gallon (2.5 m²/L)

Grout coat: 80 – 100 ft²/gallon (2 – 2.5 m²/L)

Topcoat: 250 ft²/gallon (6.25 m²/L)

All coverage rates are approximate. Coverage rates will vary with the desired texture and the porosity of the concrete.

Packaging

Epoxy coatings:

1 gallon (3.79 L) cans

5 gallon (18.95 L) pails

55 gallon (208 L) drums; available by special order

Aggregate: sold in bags

N300 CR polyurethane topcoat:

1 gallon (3.79 L) cans

5 gallon (18.95 L) pails

Features

- Slurry/broadcast
- Seed-roll application
- Clear gloss coat over a multicolored quartz coat
- Temperature in-service range of 0 – 170° F (-18 – 76° C)
- 100% solids epoxy
- Fire retardant
- Broadcast finish
- Compatible system
- Colored quartz finish
- Epoxy resins

Benefits

- Designed for ease of application
- Low installed cost
- Unique decorative appearance
- Ideal for hot and cold environments
- VOC compliant; low odor
- Self-extinguishing
- Texture can be varied to meet customer's needs
- Can be used with Selby™ membrane systems
- Available in standard and custom blends
- Good chemical resistance

Color

12 standard quartz blends.*

Custom blends are available on request; custom orders are subject to minimum quantities, increased manufacturing lead-times, and premium pricing. Refer to the Selby™ Color Selector Guide for more information.

*Color blends exhibit normal industry variations.

Shelf Life

Epoxy coatings: 2 years when properly stored.

N300 CR polyurethane topcoat: 1 year when properly stored.

Storage

Store and transport in unopened containers in a clean, dry environment. Protect from freezing.

Where to Use

APPLICATION

- Light- to medium-duty traffic areas
- Commercial applications
- Corridors
- Restrooms and showers
- Locker rooms
- Auditoriums
- Cafeterias
- Laboratories

LOCATION

- Interior

SUBSTRATE

- Apply over new and existing concrete and toppings

SELBY

Technical Data

Composition

Selbatwede 41 is a 100% solids epoxy-resin binder with colored quartz aggregate.

Typical Properties

PROPERTY	VALUE
Weight, lbs/ft² (kg/m²) At 1/8" (3 mm)	4.98 (24.3)

Test Data

PROPERTY	RESULTS	TEST METHODS
Impact strength, in-lbs	60	ASTM 2794
Compressive strength, psi(MPa)		
System	12,900(88.9)	ASTM C 579
Resin	12,000(82.7)	ASTM D 695
System	10,200(70.3)	ASTM C 109
Tensile strength, psi(MPa)		ASTM D 638
System	1,160(8.0)	
Resin	7,960(54.8)	
Tensile elongation, %	3.2	
Flexural strength, psi(MPa)		ASTM D 790
System	4,600(31.7)	
Polymer	14,100(97.1)	
Flexural modulus (resin)	398,000	
Surface flammability		ASTM E 162
Flame spread index	9.29	
Smoke deposit, mg/ms	0.1	
NBS Class	1	
Rate of burning	Self extinguishing	ASTM D 635
Mandrel bend	No cracking	ASTM D 522
Abrasion resistance, mg loss; CS-17 Wheel, 1,000 g load 1,000 cycles	< 0.078	ASTM D 4060
Indentation, in		MIL-D-24613
Initial	0.0016	
24 hr. residual	0.0008	
Impact resistance	No chipping, cracking, or delamination	MIL-D-24613
Fire resistance	Fire retardant	MIL-D-24613
Adhesive strength, psi(MPa)	> 500 (> 3.4) 100% concrete failure	ASTM D 4541
Coefficient of friction		ASTM D 2047
Dry	> 0.7	
Wet	> 1.20	
Oil absorption	Nil	MIL-D-24613
Water absorption	Nil	MIL-D-24613
Thermal stability	No de-bonding modified	ASTM C 844

Unless otherwise noted, test samples were cured 7 days at 73° F (23° C) and 50% relative humidity.
Test Results are typical values obtained under laboratory conditions. Reasonable variations can be expected.

Chemical Resistance

In accordance with ASTM D 1308, Selbatwede 41 with the standard A750/B725 finish coat will withstand exposure for up to 7 days at 72° F (22° C) for the following chemicals.

- Dilute mineral acids, including hydrochloric (< 30%), phosphoric (< 20%), and sulfuric (< 30%)
- Alkalis, including potassium hydroxide to a 50% concentration
- Some dilute organic acids such as acetic (30%), formic, citric, and uric
- Fats, oils, and sugars
- Mineral oils, diesel fuel, kerosene, and gasoline
- Some organic solvents, including aliphatic hydrocarbons

Full chemical resistance is achieved after curing for 7 days. For resistance to a specific chemical compound, consult the Selby™ Chemical Resistance Guideline.

How to Apply

Selby™ systems are installed by approved contracting firms. Selby™ is a globally branded product line with industry synergies around the world.

The following is only a summary of the installation techniques used by Selby™ approved contractors.

Surface Preparation

1. Floors must be structurally sound and fully cured a minimum of 28 days. Test floor for vapor drive in accordance with ASTM D 4263.
2. Repair concrete as necessary.
3. Use a commercial degreaser to clean floors of oil, grease and other bond-inhibiting materials.
4. Remove curing and parting compounds and other surface hardeners and floor coatings in accordance with the manufacturer's instructions.
5. Mechanical surface profiling is the method of surface preparation for both new and existing floors. Mechanically profile the floor to CSP 3 (approximating medium-grit sandpaper) as described by the International Concrete Repair Institute. Do not use acid etching for surface preparation. Do not use any method that will fracture the concrete.
6. Apply a 5 by 5 ft (1.52 by 1.52 m) test in an inconspicuous area that meets the owner's expectations for appearance, slip resistance and performance.

Mixing

1. Mix the components for this product in the following ratios:

APPLICATION	COMPONENTS	MIX RATIO
First receiving coat	A750 / B725 / Broadcast Granules	2 to 1
Second receiving coat	A750 / B725 / Broadcast Granules	2 to 1
Grout coat	A750 / B725	2 to 1
Topcoat	A750 / B725	2 to 1

2. Properly mix each component separately before mixing together to ensure a uniform consistency.
3. Combine Parts A and B in a suitably sized container. Use the proper ratios of A and B; scrape the sides of the containers to ensure a complete reaction.
4. Mix properly for 3 minutes with a slow-speed drill and Jiffy-style mixing paddle at 350 rpms. Keep the paddle below the surface to avoid entrapping air. Do not mix by hand.

Application

1. Install the cove base, as required.
2. Apply slurry/broadcast systems (see Selbaclad SLB for coverage rates) or continue receiving coat of epoxy resin at approximately 160 ft²/gallon (4 m²/L).
3. Broadcast the Selbatwede 41 aggregate by hand or by mechanical blower into the wet receiving coat. Use 1/3 lb/ft² or as required. Make certain the entire floor is saturated with aggregate, exhibiting a dry appearance.
4. Allow to cure, usually overnight; sweep, stone, and vacuum the excess aggregate.
5. Apply the second receiving coat of epoxy at approximately 100 ft²/gallon (2.5 m²/L). Broadcast the Selbatwede 41 aggregate by hand or by mechanical blower into the wet receiving coat. Use 1/2 lb/ft² or as required. Make certain the entire floor is saturated with aggregate, exhibiting a dry appearance.
6. Allow to cure, usually overnight; sweep, stone, and vacuum the excess aggregate.
7. Apply the clear grout coat at 80 – 100 ft²/gallon (2 – 2.5 m²/L) by squeegee; lightly backroll with a thick-nap roller. Allow to cure 8 – 10 hours.
8. Apply the clear finish coat at 250 ft²/gallon (6.25 m²/L) to achieve the desired texture or smoothness. For increased abrasion resistance and UV stability, substitute N300 CR for the finish coat.
9. Various curing agents can be used to achieve desired application properties; refer to the Selby™ 700 Series product data sheet.

Maintenance

Regular cleaning and maintenance will prolong the life of all polymer flooring systems, enhance their appearance, and reduce any tendency to retain dirt.

For Best Performance

- Do not expose to chemicals until fully cured (7 days).
- Precondition this product to 70° F (21° C) for 24 hours before using.
- Do not exceed the recommended recoat window of 24 hours; if in doubt, contact your BASF flooring specialist.
- Use an effective moisture barrier for substrates on or below grade; if not present, call your local BASF representative or flooring specialist for options.
- For increased abrasion resistance and UV stability, substitute N300CR for the finish coat.
- Install these products at a substrate temperature of 50 to 85° F (10° to 30° C).
- The in-service temperature range is 0 to 170° F (-18 to 76° C).
- Selbatwede 41 will follow the contour of the substrate; where this may be a concern, consider using Selby™ underlayments, Selbatwede HD, or Selbatwede 71.
- The architect and owner should address joint details with the contractor before the job starts.
- BASF representatives and flooring specialists can help you select the proper flooring system. Call 1-800-433-6739 for in-house and field technical assistance.
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health, Safety and Environmental

Read, understand and follow Material Safety Data Sheets and product labels for all components of this flooring system prior to use. The MSDS can be obtained by searching for them on www.BuildingSystems.BASF.com, e-mailing your request to basfbcsct@basf.com or calling 800/433-9517. Use only as directed.

BASF Construction Chemicals, LLC – Building Systems

889 Valley Park Drive
Shakopee, MN, 55379

www.BuildingSystems.BASF.com

Customer Service 800-433-9517
Technical Service 800-243-6739



LIMITED WARRANTY NOTICE: Every reasonable effort is made to apply BASF exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, BASF MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and BASF shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the BASF Technical Manager.

This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, BASF disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY. BASF SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BASF reserves the right to make any changes according to technological progress or further developments. It is the customer's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the customer to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.

For professional use only. Not for sale to or use by the general public.

Form No. 1025786 06/11
Printed on recycled paper including 10% post-consumer fiber.

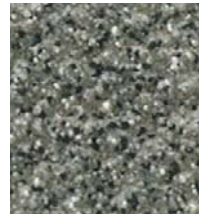
© 2011 BASF
Printed in U.S.A.

BASF Performance Flooring

Selbatwede



11



56



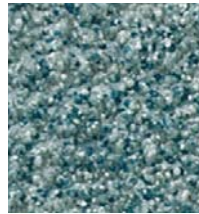
46



58



52



47



53



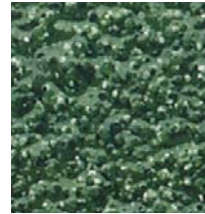
17



55



49



50



54

 **BASF**
The Chemical Company

All of the color reproductions are intended to provide an indication of color. Actual color and texture of products may vary from those shown in brochure. Applied samples and test patches are recommended for color matching and final approvals.

 **SRS**
FLOORING

SELBY

1 (800) 445-6182

(4/09)

BASF Performance Flooring

Selbatwede



11



56



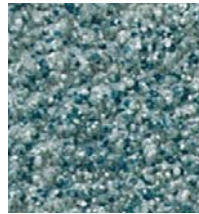
46



58



52



47



53



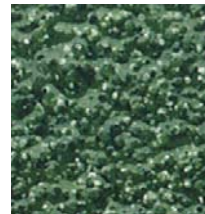
17



55



49



50



54



All of the color reproductions are intended to provide an indication of color. Actual color and texture of products may vary from those shown in brochure. Applied samples and test patches are recommended for color matching and final approvals.



1 (800) 445-6182

(4/09)

Page 1 of 1

Date Recd: 4/25/2014

Subcontractor: _____
 Submittal Type: - - -

Description: Porcelain Paver, Wall Tile, Mortar, Grout

- ☒ **1. Reviewed/No Exceptions Taken (UON)**
Provide physical samples for review
- ☐ **2. Make Corrections Noted (Resubmittal Not Required)**
- ☐ **3. Revise as Noted and Resubmit**
- ☐ **4. Incomplete Submittal, Submit Missing Information**
- ☐ **5. Rejected, Resubmit as Specified**
- ☐ **6. Retained for A/E/Owner Record Only, without A/E Review**

Other Comments



The Summit Collection is a highly durable, easy to maintain porcelain flooring tile that has faithfully reproduced the look of stone quarried in the Burgundy region of France. Its straight edge and monolithic color lends itself beautifully to contemporary styles.

Product Usage Recommendations

- Suitable for all indoor wall and flooring applications.
- Outdoor use subject to method of installation; material not affected by freeze/thaw.
- Complies with ADA slip requirements for horizontal surfaces in wet environments.
- Suitable for wet applications including shower, pool and fountain.

Installation & Maintenance Guidelines

- Install per industry standards for porcelain tile.
- Always inspect material prior to installation; installed material cannot be accepted for return or credit.

Collection

Field: 17 3/8" x 17 3/8", 11 5/8" x 23 3/8"

Mosaic: 2" x 2" straight

Trim: 2 7/8" x 17 3/8" surface bullnose

Colors: bark, charcoal, *charcoal flamed

*charcoal flamed only available in 11 5/8" x 23 3/8" field and 2" x 2" straight mosaic

LEED Credit Contributions

- Recycled Content
Pre-consumer: 40%

Other Environmental Attributes

- Recommended for durability planning in areas with interior moisture loads.





Capriccio is a handcrafted tile with a refined body and transparent glazes reminiscent of classic French ceramics. A soft palette of timeless colors and simple moldings offer a European appearance at a great value.

Product Usage Recommendations

- Suitable for all indoor wall and light use flooring applications.
- Caution recommended for kitchen or bathroom areas as finish may etch where acidic substances or cleansers are frequently used.

Installation & Maintenance Guidelines

- Install per industry standards for ceramic tile.
- Always inspect material prior to installation; installed material can not be accepted for return or credit.
- It is recommended to seal with a penetrating sealer before and after grouting.

Collection

Field : 2" x 4", 4" x 4", 3" x 6"

Trim : 1/2" x 6" liner, 1" x 6" quarter round, 2 1/4" x 6" cornice, 2 1/4" x 6" classic molding, 3" x 3" double bullnose, 3" x 6" surface bullnose (long or short edge), 2" x 2" DBN, 4" x 4" DBN, 3" x 3" DBN, 2" x 4" SBN (long or short edge), 4" x 4" SBN,

Colors : antique white, dove, pale green, sky blue, soft yellow, white and black gloss available for 1/2" x 6" liner, classic molding and cornice only.





Beautiful in its simplicity, Davenport is the perfect workhorse for your basic projects. A livable palette and a variety of sizes and trims at an affordable price point make this collection an ANN SACKS essential.

Product Usage Recommendations

- Suitable for all residential interior vertical applications.
- Light use counters.
- Light to medium use indoor flooring, preferable powder rooms and baths as gloss glaze may scratch in high traffic or where grit from shoes is prevalent.
- Crackle glaze should be sealed and is not recommended for wet areas.
- Wet areas should be sealed to protect grout and reduce moisture penetration through grout.

Installation and Maintenance Guidelines

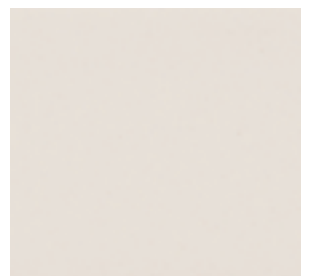
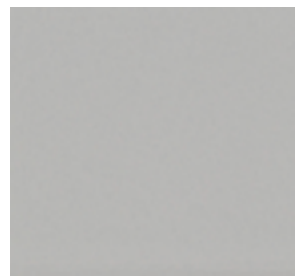
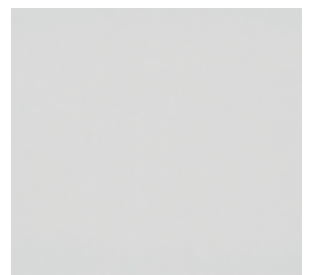
- Install per industry standards for ceramic tile.
- Always inspect material prior to installation; installed material cannot be accepted for return or credit.
- Recommended to seal tile and grout for ease of maintenance, especially in wet areas or where grout may come into contact with staining agents.

Collection

Field: 2" x 4", 2" x 8", 3" x 6", 3" x 6" beveled, 3" x 9", 4" x 4", 4" x 8", 6" x 6", 6" x 12"

Trim: 1/2" x 6" pencil liner, 1/2" x 6" liner, 1/2" x 6" pearl liner, 1" x 6" liner, 1 1/2" x 6" cap, 1 1/2" cap out corner, 2" x 6" cap, 2" cap out corner, 3" x 6" cap, 3" cap out corner, 4" x 6" cap, 4" cap out corner, 4" x 4" SBN, 4" x 4" DBN, 6" x 6" SBN, 6" x 6" DBN

Colors: dove, frost, herb, sand, soft beige, snow matte, summer, white crackle, white gloss



VersaBond® Fortified Thin-Set Mortar

1 Product Name

VersaBond® Fortified Thin-Set Mortar

2 Manufacturer

Custom® Building Products

3 Product Description

A professional formula, all-purpose mortar, polymer-modified to provide good bond strength for floor and tile projects. VersaBond® cures quickly even in cold climates and adheres to most surfaces, exceeding ANSI A118.4 and A118.11 without the need for additives.

Suitable Tile Types

Vitreous, semi-vitreous or non-vitreous tile: ceramic, mosaic, quarry, cement body tile

- Impervious porcelain and glass tile
- Brick and thin brick
- Cement-based precast terrazzo
- Natural stone tile

Suitable Substrates

- Concrete, mortar beds, masonry, Portland cement plaster
- [WonderBoard® cement backerboards](#)
- Liquid applied waterproofing membranes such as [RedGard®](#) and [Custom® 9240](#)
- Crack prevention sheet membranes such as [Crack Buster® Pro](#)
- Exterior Grade Plywood (interior residential and light commercial dry areas)
- Gypsum wallboard (interior dry areas)
- Existing ceramic tile (scarified)
- Fully-bonded sheet vinyl flooring (scarified)
- Plastic laminates (scarified)
- Cutback adhesive (see preparation instructions)

Composition of Product

VersaBond® Fortified Thin-Set Mortar is a dry, proprietary blend of Portland cement, copolymers, inorganic aggregates and chemicals

Benefits of Product in the Installation

- Cost-efficient, all-purpose mortar
- Good bond strength
- Cures quickly even in cold climates
- Exceeds ANSI A118.4 and A118.11 standards without the need for additives



Limitations to the Product

- Do not bond directly to hardwood, Luan plywood, particle board, parquet, cushion or sponge-back vinyl flooring, metal, fiberglass, plastic or OSB panels.
- When setting moisture sensitive natural stone, cement or agglomerate tile use EBM-Lite™ Epoxy Bonding Mortar 100% Solids or CEG-Lite™ 100% Solids Commercial Epoxy Grout.
- Do not use to install resin-backed stone use EBM-Lite™ Epoxy Bonding Mortar 100% Solids, CEG-Lite™ 100% Solids Commercial Epoxy Grout or contact Custom's® Technical Services for recommendations.
- When setting glass tile larger than 6" x 6" (15 x 15 cm), contact Custom's® Technical Services for recommendations.
- When setting dimensional stone larger than 12" x 12" (30 x 30 cm), contact Custom's® Technical Services for recommendations regarding subfloor deflection requirements.

Packaging

- 50 lb (22.68 kg) and 25 lb (11.34 kg) bags
- Gray or white

4 Technical Data

Applicable Standards

American National Standards Institute (ANSI) — ANSI A108.5, A137.2, A118.4 and A118.11 of the American National Standards for the Installation of Ceramic Tile ASTM International (ASTM)

- ASTM C109 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in or [50-mm] Cube Specimens)
- ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester Resilient Floor Covering Institute — (RFCI) Recommended Work Practices for Removal of Resilient Floor Coverings Tile Council of North America (TCNA) — TCNA Handbook for Ceramic Tile Installation, TCNA Method EJ171
- ISO 13007-2



VersaBond® Fortified Thin-Set Mortar

Technical Chart

Property	Test Method	Requirement	Typical Results
Pot Life			4 Hours
Open Time	A118.4 Section 4.4	> 50 Minutes	50 - 55 Minutes
Adjustment Time	A118.4 Section 4.5	> 30 Minutes	30 - 35 Minutes
4 Week Shear Bond Strength			
Glazed Wall Tile	A118.4 Section 5.1.5	> 300 psi	450 - 550 psi (31.6 - 38.7 kg/cm ²)
Porcelain Tile	A118.4 Section 5.2.4	> 200 psi	300 - 400 psi (21.1 - 28.1 kg/cm ²)
Quarry Tile to Plywood	A118.11 Section 4.1.2	> 150 psi	150 - 250 psi (10.5 - 17.6 kg/cm ²)
Sag on Walls	A118.4 Section 4.6	< 1/16"	

Environmental Consideration

Custom® Building Products is committed to environmental responsibility in both products produced and in manufacturing practices. Use of this product can contribute to LEED® certification.

5 Instructions

General Surface Prep

Surfaces must be structurally sound. Remove all grease, oil, dirt, curing compounds, sealers, adhesives or any other contaminant that would prevent a good bond. Glossy or painted surfaces must be sanded, or abraded, and stripped of all contaminants. Concrete must be cured 28 days and accept water penetration. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a course finish to enhance the bond. Plywood flooring including those under resilient flooring must be structurally sound and meet all ANSI and deflection requirements. For questions about proper subfloor installation, call Technical Services. Smooth concrete surfaces, existing glazed tile, terrazzo, or polished stone should be scarified. Sheet vinyl must be well bonded and stripped of old finish. Roughen the surface by sanding or abrading, then rinse and allow to dry. Expansion joints should never be bridged with setting material. Do not sand flooring materials containing asbestos. Ambient temperature should be maintained above 50° F (10° C) or below 100° F (38° C) for 72 hours to achieve proper bond.

Bonding to Cement Surfaces

Concrete or plaster must be fully cured and must accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved; if water beads, surface contaminants are present, and loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a course finish to enhance the bond. Smooth concrete slabs must be mechanically abraded to achieve proper bond.

Bonding to Lightweight Cement and Gypsum Surfaces

Lightweight or gypsum based underlayments must obtain a minimum 2000 psi (13.8 MP) compressive strength. The underlayment must be sufficiently dry and properly cured to the manufacturer's specifications for permanent, non-moisture permeable coverings. Surfaces to be tiled must be structurally sound and subject to deflection not to exceed the current ANSI Standards. Surfaces shall be free of all grease, oil, dirt, dust, curing compounds, waxes, sealers, efflorescence, or any other foreign matter. All Lightweight cement or Gypsum surfaces should be primed with a properly applied sealer or a primer coat of RedGuard, consisting of 1 part RedGuard diluted with 4 parts clean, cool water. Mix in a clean bucket at low speed to obtain a lump free solution. The primer can be brushed, rolled or sprayed to achieve an even coat. Apply the primer coat to the floor at a rate of 300 sq. ft./l (7.5 sq. m/L). Drying time depends on site conditions, but is normally less than 1 hour. Extremely porous surfaces may require 2 coats. At this point, RedGuard can be applied to the primed lightweight or gypsum based surface. Refer to the individual product data sheet or packaging directions for application instructions. Expansion joints must be installed in accordance with local building codes and ANSI/TCNA guidelines. Refer to TCNA EJ171.

Bonding to Plywood Surfaces

Plywood floors, including those under resilient flooring, must be structurally sound and must meet all ANSI A108.01 Part 3.4 requirements. Maximum allowable deflection: L/360 tile L/720 stone. See TCNA F150. For questions about proper subfloor installation, call Custom Building Products.

Bonding to Wonderboard Backerboards

As an alternative to an additional layer of plywood, WonderBoard backerboard may be installed over plywood subfloors for ceramic tile installations. Refer to TCNA F144. Call tech support when installing natural stone over plywood subfloor (TCNA F-141-11 & F-250-11). Only approved installation methods for stone.

Bonding to Existing Surfacing Material

Existing Ceramic Tile, Resilient Flooring or Plastic Laminates: Resilient flooring or plastic laminates must be well bonded, as well as clean and free of all contaminants. Roughen the surface by sanding or scarifying; rinse and allow to dry. Do not sand flooring that contains asbestos. For existing well bonded ceramic tile, mechanically abrade the surface. Rinse and allow to dry. When sanding, an approved respirator should be used.

Bonding to Cutback Adhesive

Adhesive layers must be removed, as they reduce mortar bond strength to cement surfaces. Use extreme caution; adhesives may contain asbestos fibers. Do not sand or grind adhesive residue, as harmful dust may result. Never use adhesive removers or solvents, as they soften the adhesive and may cause it to penetrate into the concrete. Adhesive residue must be wet scraped to the finished surface of the concrete, leaving only the transparent staining from the glue. To determine desirable results, do a test bond area before starting. Refer to the RFCI Pamphlet, "Recommended Work Practices for Removal of Resilient Floor Coverings" for further information.



VersaBond® Fortified Thin-Set Mortar

Expansion Joint placement

Expansion joints and cold joints, as described in ANSI A108.01, should never be bridged with setting material. They must be brought through the tile work and filled with an appropriate elastomeric sealant, such as Custom's 100% Silicone. Contact Custom's Technical Services for the proper treatment of control or saw cut joints. Refer to TCNA EJ171, F125 & F125A.

Mixing Ratios - powder to water

Mix 6 qts (5.68 L) clean water per 50 lb (22.68 kg) bag of mortar.

Mixing Procedures

Mix by hand or use a low 150 – 200 rpm speed 1/2" (13 mm) drill to achieve a smooth, paste-like consistency. Let the mixture slake or stand 5 – 10 minutes; stir again and use. Stir occasionally, but do not add more water. When properly mixed, troweled ridges will stand without slump.

Application of Product

Installation must conform to ANSI A108.5. Use a properly-sized notch trowel to ensure proper coverage under tiles. Using the flat side of the trowel, apply a skim coat of mortar to the surface. With the notch side of the trowel held at a 45° angle, apply additional mortar to the surface, combing in one direction. Press the tile firmly into place in a perpendicular motion across ridges, moving back and forth. The perpendicular motion flattens ridges and closes valleys, allowing maximum coverage. With some tile, back-buttering is advisable. Adjust the tile promptly and beat it in with a beating block and rubber mallet. Periodically pull up a tile and check the back to ensure proper adhesive coverage. If the material has skinned over (not sticky to the touch), recomb with the notch trowel; if too dry, remove and replace the dry material with fresh material. Material in the bucket will remain workable for approximately 4 hours.

Curing of Product

Curing time is affected by ambient and surface temperatures and humidity. Use the following as a guideline. Allow 24 hours before grouting or light traffic.

Cleaning of equipment

Clean with water before the material dries.

Storage

Store in a cool dry area.

Health Precautions

This product contains Portland cement and free silica. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Do not breathe dust; wear a NIOSH approved respirator.

Conformance to Building Codes

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6 Availability & Cost

Product Name	Location	Item Code	Size	Color	Package
VersaBond Flex® Fortified Thin-Set Mortar	USA	MTSG25	25 lb (11.34 kg)	Gray	Bag
	USA	MTSG50	50 lb (22.68 kg)	Gray	Bag
	USA	MTSW50	50 lb (22.68 kg)	White	Bag
	Canada	CVBG50	50 lb (22.68 kg)	Gray	Bag
	Canada	CVBW50	50 lb (22.68 kg)	White	Bag

7 Product Warranty

Custom Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Custom's sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Custom's printed instructions. Custom makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another. Click for details and complete [warranty information](#).

8 Product Maintenance

Properly installed product requires no special maintenance.

9 Technical Services Information

For technical assistance, contact Custom® Building Products.

10 Filing System

Additional product information is available from the manufacturer upon request.

Expected Wear

Properly installed tile will last for more than 60 years.

Related Products

Polyblend® Sanded Grout



CUSTOM®

CEG-Lite™ 100% Solids Commercial Epoxy Grout

1 Product Name

CEG-Lite™ 100% Solids Commercial Epoxy Grout

2 Manufacturer

Custom Building Products
13001 Seal Beach Blvd.
Seal Beach, CA 90740-2757
Customer Support: 800-272-8786
Technical Services: 800-282-8786
Fax: 800- 200-7765
Email: contactus@cbpmail.net
custombuildingproducts.com

3 Product Description

Two-component epoxy system that combines a pigmented hardener with the container of resins and lightweight recycled aggregates to fill joint widths from 1/16" to 1/2" (1.5-13 mm). Its lightweight properties make it spread like a cement based grout and allow it to cling in vertical joints without an additive like no other epoxy grout can while still allowing for easy water based clean-up.

Uses

- CEG-Lite can be used as both a grout and as a setting mortar
- Use with virtually any tile - vitreous, semi-vitreous or impervious tile including ceramic, mosaic, quarry, pavers, cement, porcelain, glass, brick, mini-brick, precast terrazzo and natural stone, including green marble
- Use to fill joint widths from 1/16" to 1/2" (1.6 – 13 mm)
- It may be used for both floor or wall installations after tiles have been properly embedded
- Interior and exterior applications

Suitable Substrates

- Countertops, backsplashes, tub and shower areas, sunken tile tubs and swimming pools that are continually wet
- Plumb and true masonry, concrete, cured Portland cement mortar beds
- Bonds directly to brick, ceramic tile, cementitious backer units, steel, glass and fiberglass

Composition of Product

2-part formula, with Part A pigmented liquid epoxy hardener and Part B liquid epoxy resin combined with aggregates.

Benefits of Product in the Installation

- 2-Part 100% Solids Epoxy
- No shrinkage
- Color consistent and stain resistant
- No additive needed for critical grouting applications
- Contains recycled LEED® contributing materials



Limitations to the Product

- Should not be used in an environment with temperature requirements above 250°F (121°C) for any extended period of time.
- When used to install tile in an area that will be continually wet (e.g. swimming pools, gang showers, etc.), it is recommended that the complete installation be cured 14 days prior to full submersion with chemically treated water.
- Epoxy, epoxy residue, or wash water will discolor painted or anodized surfaces upon contact. Protect these surfaces from exposure.
- Vertical grout joint width should not exceed 1/2" (13 mm).
- Should be tested for possible staining or slight color changes when used with porous, absorptive, textured tile and stone units such as rough textured ceramic tile, natural stone or marble.
- All epoxies are temperature sensitive. Epoxies are easiest to apply when temperatures are between 70°F and 85°F (21°C and 29°C). Lower temperatures will cause the epoxy to become stiff and more difficult to work and will extend initial set. Higher temperatures will cause the epoxy to become more fluid and will accelerate the set.
- With all epoxies, a crystallization effect can occur when the liquid gets below 45°F (7°C) and/or has experienced multiple cycles of high and low temperature changes. If material is hard, place the sealed container (with the lid on), in warm tap water at approximately 120°F (49°C) for 10 to 20 minutes, and when re-liquified, let the material return to room temperature before mixing.
- Not recommended in some manufacturing facilities where heavy solvents are used. Consult Technical Services on questionable installations.
- Colors may be slightly different than shown on color samples. When color considerations are critical, a mock-up should be constructed prior to final selection and application.
- The use of non-rinse, enzyme-based cleaners is not recommended because they will break down the organic materials in epoxy grout, causing permanent damage.

Packaging

Grout mixture requires two separately-sold parts:



CEG-Lite™ 100% Solids Commercial Epoxy Grout

- Part A 1.3 lb (.58 kg) container of pigmented liquid epoxy hardener, available in 27 standard colors
- Part B 19 lb (8.6 kg) or 9.5 lb (4.3 kg) liquid epoxy resin combined with aggregates

4 Technical Data

Applicable Standards

Detailed installation procedures and use of epoxy mortars may be found in the TCNA Handbook under F-113, F-114, F-115, F-116, F-125, F-128, F-143, F-131, F-132, F-134, F-135, F-200, F-205, TR-711 and TR-712 and in addition, in ANSI A108.6. Exceeds ANSI A118.3 specifications. Conforms to requirements for chemical-resistant, water cleanable tile setting and grouting epoxy found in ANSI A108.6 and ANSI A118.3.

Technical Chart

Property	Test Method	Requirement	Typical Results
Epoxy Grout			
Water Cleanability	A118.3 Section 5.1	> 80 Minutes	>80 Minutes
Initial Set	A118.3 Section 5.2	> 2 Hours	>2 Hours
Shrinkage	A118.3 Section 5.3	< 0.25%	
Sag in Verticle Joints	A118.3 Section 5.4	No Change	
Shear Bond Strength to Quarry Tile	A118.3 Section 5.5	> 1000 psi	Pass
Compressive Strength	A118.3 Section 5.6	> 3500 psi	5,800 psi
Tensile Strength	A118.3 Section 5.7	> 1000 psi	1,700 psi
Thermal Shock Resistance	A118.3 Section 5.8	> 500 psi	900 psi

5 Instructions

General Surface Prep

All surfaces on which tiles are to be set must be dry, structurally sound, and not subject to temperatures below 65° F (18° C) or above 95° F (35° C). Surfaces must be dry and free of all grease, oil, dirt, dust, curing compounds, sealers, coating, efflorescence, old adhesive residues, gypsum-based underlayments and any other foreign matter.

Bonding to Cement Surfaces

Cleaning may be accomplished via mechanical abrasion, scraping or chipping. Surfaces may be cleaned with muriatic acid if thoroughly flushed and neutralized. (Use proper precautions.) Smooth, steel-troweled concrete floors must be roughened to ensure a superior bond. Dry porous concrete should not be pre-dampened with water before applying CEG-Lite™ mortar. Instead, skim-coat a thin layer of CEG-Lite™ mortar first, then apply sufficient CEG-Lite™ mortar with the appropriate notch trowel.

Bonding to Plywood Surfaces

All wood flooring, when placed over conventional floor joist or other systems, should be of a design and thickness so as to meet ANSI A108.01. Further, the flooring to receive the CEG-Lite™ mortar should be Exterior Grade Plywood only, secured with screw-type nails and glued where possible. A gap of 1/8" (3 mm) should be left between sheets of plywood and between the plywood edges and all materials which they abut to allow for expansion. These gaps should remain empty when the installation is complete. Do not force epoxy between edges of plywood sheets. Follow TCNA EJ-171 for expansion joint details. In addition, all wooden surfaces must be for interior use only and protected from exposure to water.

Miscellaneous Substrates

Other substrates like existing ceramic tile, steel, glass and fiberglass must all be free of all oils, coatings, dust and moisture. In addition, these surfaces should be roughened to ensure a good bond. It is also absolutely essential that the existing surface be structurally sound and firmly attached to the supporting structure.

Construction/Expansion/Control/Isolation Joints: Follow installation procedures as outlined in TCNA EJ-171.

Bonding to Existing Surfacing Material

Tile must be firmly attached to a sound substrate with the mortar adequately cured per the mortar manufacturer's recommended time, before grouting. Remove all spacers. Grout joints should be free of all loose debris, contaminants and excess mortar.

Mixing Procedures

Open Part B and stir thoroughly to eliminate the effects of settling due to shipping. Add the entire contents of the pigment Part A to Part B and stir to produce a homogeneous consistency, eliminating any color streaks from appearing in the mixed unit. Do not mix partial units. Make sure to scrape bottom and sides of container during mixing.

NOTE: If using small 1-gallon unit, mix with 1 unit of color. If using large 2-gallon unit, mix with 2 units of color. If a power mixer is used, it must be 300 RPM or less to avoid entrapping air bubbles which cause pinholes in the grout. Do not overmix as this will cause the epoxy to flash set.

Application of Product

Remove all grout from container and spread out in piles over the surface to be grouted as soon as mixing is completed. This will extend working time. When grouting walls, place epoxy on a mortarboard placed on the floor. Grout vertical surfaces as soon as possible after mixing. Apply grout using a hard epoxy rubber float, filling all joints full and even with surface of tile.



CUSTOM®

CEG-Lite™ 100% Solids Commercial Epoxy Grout

It is important to achieve 100% fill coverage with no voids in the joints to prevent pinholes and slumping of the epoxy grout. Remove excess epoxy by holding the grout float at a 90° angle and pulling the float diagonally across the grout joints using it like a squeegee. Removing as much epoxy as possible will make final cleaning easier. Avoid gouging joints. Do not allow epoxy to set on face of tile. Apply liberal amounts of clean, warm water to the grouted area. Adding a few drops (maximum) of dishwashing liquid to the water will aid in cleanup. Using a grout sponge and as little pressure as possible, work in a circular motion across tiles to loosen epoxy film and to finish the joints smoothly. Change rinse water (and sponge if buildup occurs) frequently to aid in cleanup and minimize epoxy residue left behind. As a final step, clean film from tile by dragging a damp, clean microfiber towel flatly across the tiles.

NOTE: On porous or rough tiles, pre-grout sealing with agrout release may be necessary to prevent staining. Try a test patch to be sure. Epoxy and epoxy wash residue should not be allowed to dry on painted, anodized and thin metal-plated surfaces. Clean uncured materials from these surfaces immediately with soap and water.

Application for Use as a Mortar

Spread mixed epoxy with flat side of trowel onto substrate. Then, reapply additional mortar to a depth sufficient to be notched with a suitable trowel. Troweling should leave enough mortar to give 100% contact with back of the tile and a leave a mortar bed of about 1/16" (1.6 mm) for ceramic mosaic tile to 1/8" (3 mm) for quarry tile. Temperature affects set time; therefore, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer is being made. Approximate tack time is 30 minutes at 75°F (24°C). Pot life is approximately 60 minutes at 75°F (24°C). Should epoxy mortar get on surface of tile, it will be necessary to remove it with a damp sponge before it cures. Epoxy residue should not be allowed to cure on unintended surfaces (e.g. painted, wall papered, carpeted, wood, concrete, masonry and stucco surfaces).

Curing of Product

Available for light traffic after 24 hours and for heavy traffic after 72 hours. Protect from harsh industrial cleaners for seven days and from aggressive chemicals for 14 days. Initial maintenance for the first seven days should be using clean water only. All grouting and cleaning should be completed within 80 minutes. If haze is present the day following grouting, contact Technical Services or refer to the website for instructions regarding removal of cured or hard epoxy.

Cleaning of equipment

Clean tools and hands with water before material dries.

Storage

Keep from freezing.

Health Precautions

May irritate eyes. May irritate skin. Do not swallow. Do not get in eyes. Do not get on skin or clothing. Do not breathe fumes. KEEP OUT OF REACH OF CHILDREN. Wear safety glasses and chemical-resistant gloves. First Aid Treatment: If swallowed, call a poison control center or doctor immediately. Do not induce vomiting. If in eyes, rinse with water 15 minutes. If on skin, rinse well with water.

Conformance to Building Codes

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6 Availability & Cost

Item Code	Size	Grout Color	Package
Part A			
LWCEG09A-EA	1.3 lb pail	#09 Natural Gray	Tub
LWCEG10A-EA	1.3 lb pail	#10 Antique White	Tub
LWCEG19A-EA	1.3 lb pail	#19 Pewter	Tub
LWCEG35A-EA	1.3 lb pail	#35 Chaparral	Tub
LWCEG45A-EA	1.3 lb pail	#45 Summer Wheat	Tub
LWCEG52A-EA	1.3 lb pail	#52 Tobacco Brown	Tub
LWCEG59A-EA	1.3 lb pail	#59 Saddle Brown	Tub
LWCEG60A-EA	1.3 lb pail	#60 Charcoal	Tub
LWCEG92A-EA	1.3 lb pail	#92 Admiral Blue	Tub
LWCEG96A-EA	1.3 lb pail	#96 Quarry Red Clay	Tub
LWCEG101A-EA	1.3 lb pail	#101 Quartz	Tub
LWCEG105A-EA	1.3 lb pail	#105 Earth	Tub
LWCEG122A-EA	1.3 lb pail	#122 Linen	Tub
LWCEG127A-EA	1.3 lb pail	#127 Antique Linen	Tub
LWCEG135A-EA	1.3 lb pail	#135 Mushroom	Tub
LWCEG145A-EA	1.3 lb pail	#145 Light Smoke	Tub
LWCEG156A-EA	1.3 lb pail	#156 Fawn	Tub
LWCEG165A-EA	1.3 lb pail	#165 DeLorean Gray	Tub
LWCEG180A-EA	1.3 lb pail	#180 Sandstone	Tub
LWCEG183A-EA	1.3 lb pail	#183 Chateau	Tub
LWCEG185A-EA	1.3 lb pail	#185 New Taupe	Tub
LWCEG312A-EA	1.3 lb pail	#312 Bonsai	Tub
LWCEG333A-EA	1.3 lb pail	#333 Alabaster	Tub
LWCEG380A-EA	1.3 lb pail	#380 Haystack	Tub
LWCEG381A-EA	1.3 lb pail	#381 Bright White	Tub
LWCEG382A-EA	1.3 lb pail	#382 Bone	Tub
LWCEG386A-EA	1.3 lb pail	#386 Oyster Gray	Tub
Part B			
LWCEGB1-EA	9.5 lb pail	n/a	Pail
LWCEGB2	19 lb pail	n/a	Pail



CUSTOM®

CEG-Lite™ 100% Solids Commercial Epoxy Grout

7 Product Warranty

Custom® Building Products warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Custom's® sole liability under this warranty shall be limited to the replacement of the product. Some states, countries or territories do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Custom's® printed instructions. Custom® makes no other warranties either expressed or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state or from one country/territory to another. Click for details and complete [warranty information](#).

8 Product Maintenance

Clean with a neutral cleaner such as Aquamix AquaKleen or Tilelab Grout & Tile Cleaner

9 Technical Services Information

For technical assistance, contact Custom® Building Products.

10 Filing System

Additional product information is available from the manufacturer upon request.

Related Products

Commercial 100% Silicone Caulk



CEG-Lite™ 100% Solids Commercial Epoxy Grout

Coverage

Coverage As a Grout

Coverage will vary depending on tile size and joint width. Coverages are approximate and may be reduced by 10 – 20%+ based on waste, spillage and project conditions.

SQUARE FOOT COVERAGE PER 1 GALLON UNIT (SQUARE METER PER 3.78 L)

Tile Size	Joint Width				
	1/16" (1.6 mm)	1/8" (3 mm)	1/4" (6 mm)	3/8" (9.5 mm)	1/2" (13 mm)
1" x 1" x 1/8" (25 x 25 x 3)	100 (9.3)	54 (5.0)	32 (3.0)	24 (2.2)	20 (1.9)
1" x 1" x 1/4" (25 x 25 x 6)	50 (4.6)	27 (2.5)	16 (1.5)	12 (1.1)	10 (0.9)
2" x 2" x 1/4" (50 x 50 x 6)	95 (8.8)	50 (4.6)	27 (2.5)	20 (1.9)	16 (1.5)
4 1/4" x 4 1/4" x 1/4" (108 x 108 x 6)	198 (18.4)	101 (9.4)	53 (4.9)	37 (3.4)	29 (2.7)
6" x 6" x 1/4" (150 x 150 x 6)	277 (25.7)	141 (13.1)	73 (6.8)	50 (4.6)	38 (3.5)
6" x 6" x 1/2" (150 x 150 x 13)	139 (12.9)	70 (6.5)	36 (3.3)	25 (2.3)	19 (1.8)
8" x 8" x 3/8" (200 x 200 x 9.5)	246 (22.9)	124 (11.5)	64 (5.9)	43 (4.0)	33 (3.1)
8" x 8" x 1/2" (200 x 200 x 13)	184 (17.1)	93 (8.6)	48 (4.5)	33 (3.1)	25 (2.3)
12" x 12" x 3/8" (300 x 300 x 9.5)	367 (34.1)	185 (17.2)	94 (8.7)	64 (5.9)	48 (4.5)
16" x 16" x 3/8" (406 x 406 x 9.5)	489 (45.4)	246 (22.9)	124 (11.5)	84 (7.8)	64 (5.9)
12" x 12" x 1/2" (300 x 300 x 13)	275 (25.5)	139 (12.9)	70 (6.5)	48 (4.5)	36 (3.3)
24" x 24" x 1/2" (600 x 600 x 13)	549 (51.0)	275 (25.5)	139 (12.9)	93 (8.6)	70 (6.5)

Coverage As A Mortar

SQUARE FOOT COVERAGE PER 1 GALLON UNIT (SQUARE METER PER 3.78 L)

Trowel Size	Coverage
1/4" x 1/4" x 1/4" Square-Notch Trowel (6 x 6 x 6 mm)	20 – 25 sq ft (2.1 – 2.5 M ²)
3/16" x 5/32" V-Notch Trowel (5 x 4 mm)	35 – 40 sq ft (3.2 – 3.7 M ²)



CUSTOM®

Submittal Number: **024.A**

Specifications Sections: 09 91 00 - - -

Subcontractor: 2.1G Paint Materials Type G Resubmittal

Submittal Type: - - -

Description:

-
- ☒ **1. Reviewed/No Exceptions Taken (UON)**
- ☐ **2. Make Corrections Noted (Resubmittal Not Required)**
- ☐ **3. Revise as Noted and Resubmit**
- ☐ **4. Incomplete Submittal, Submit Missing Information**
- ☐ **5. Rejected, Resubmit as Specified**
- ☐ **6. Retained for A/E/Owner Record Only, without A/E Review**

Other Comments



Zinsser Co., Inc. Somerset NJ 08875

An RPM Company

Technical Data Bulletin

SHIELDZ UNIVERSAL

Pre-Wallcovering Primer

- Primes, hides, seals, and sizes in one step.
- Excellent adhesion to all paintable surfaces.
- High hiding to cover colors and patterns.
- Seals "builders flat" latex paint.
- Compatible with all wallcovering adhesives and all wallcoverings.
- Resists rewetting for effective double-cutting and repositioning.
- Protects wallboard from damage when removing wallpaper; promotes easier strippability.
- Virtually no odor water-base formula.



Selection Data

Generic Type – Pigmented, water-base acrylic latex, universal wallcovering primer/sealer.

Recommended Uses – Recommended for application to interior walls, ceilings, and related surfaces prior to installing wallcovering. SHIELDZ UNIVERSAL may also be used to prime walls, ceilings, trim, doors, and similar surfaces before applying paint.

Color/Tinting – SHIELDZ UNIVERSAL is bright white but may be tinted to blend with most medium background colors by adding no more than 4 oz. universal colorant per gallon. If a dark, non-hiding primer color is needed, use SHIELDZ CLEAR Acrylic Wallcovering Primer/Sizing.

Coverage – 400 to 550 sq. ft. per gallon (16 to 22 single rolls). Application losses will vary with the porosity of the substrate and the method of application and should be taken into account when estimating the quantity of product needed.

Application Data

Surfaces – SHIELDZ UNIVERSAL is recommended for application to the following substrates: New or previously painted gypsum wallboard (drywall), cured plaster; wood paneling; ceramic tile; glass; Formica®; and existing non-porous wallcoverings (i.e., vinyl or vinyl-coated).

Surface Preparation – Surfaces should be clean, dry and free of dust, dirt, chalky material, grime, grease, oil, wax, silicone, mildew, wallpaper adhesive, or any contamination that may interfere with adhesion. If unsure, always wash surface with an appropriate cleaning solution or solvent.

Mildew – Clean mildew with a solution of 1 part laundry bleach and 3 parts warm water or use a specialty cleaner formulated for this purpose.

Stains – Apply an appropriate stain killing primer such as Zinsser's BI-N, Bulls Eye 1-2-3, or Cover-Stain to prevent stains from bleeding into the wallcovering.

Peeling paint – Any existing coatings that are not soundly adhered should be removed by the best available means, usually sanding and/or scraping.

New paint – Allow freshly applied latex paint to cure at least 14 days before priming.

New gypsum wallboard (drywall) – Remove sanding dust. On drywall that has been skim coated with drywall mud or spackling compound apply a second coat of SHIELDZ UNIVERSAL 2 hours after the first coat. Commercial vinyl wallcovering may require two coats for complete protection. Wait 21 days or longer for wallcovering adhesive to fully cure before removing fabric-backed vinyl wallcovering from new drywall. Drywall damage may occur during removal if wallcovering adhesive is not fully cured.

Other – Fill paneling grooves, nail holes, gouges, and other surface damage with Zinsser's Ready Patch or similar interior spackling compound prior to priming.

Metallic inks – Certain types of existing wallcovering may have patterns printed with metallic-based inks that will bleed through most water-base coatings. To prevent bleed through prime these wallcoverings with BI-N and allow to dry for 2 hours before applying SHIELDZ UNIVERSAL.

Removing existing wallcovering – It is always recommended to remove existing wallcovering before installing new wallcovering. For best results use Zinsser's DIF® Wallpaper Stripper, PaperTiger® Scoring Tool, and Paper Scraper. After stripping off wallcovering wash walls thoroughly to remove all residual adhesive. If removal of existing wallcoverings is not practical, follow the guidelines below for non-porous and porous wallcoverings.

Priming over non-porous wallcovering – SHIELDZ UNIVERSAL may be applied over well-adhered non-porous wallcoverings and will hide colors and patterns. A second coat of SHIELDZ UNIVERSAL may be necessary to cover strong color contrasts.

Priming over porous wallcovering – Seal old, well-adhered, porous wallcovering with BI-N to prevent moisture from reactivating old adhesive. Let dry for 2 hours and prime with SHIELDZ UNIVERSAL.

Submittal Review VAPA Dialysis Renovation

Page 1 of 1

Submittal Number: **052** Date Recd: 2/26/2014

Specifications Sections: 09 51 00 - - -

Subcontractor: Ceilings

Submittal Type: Product Data/Other - - -

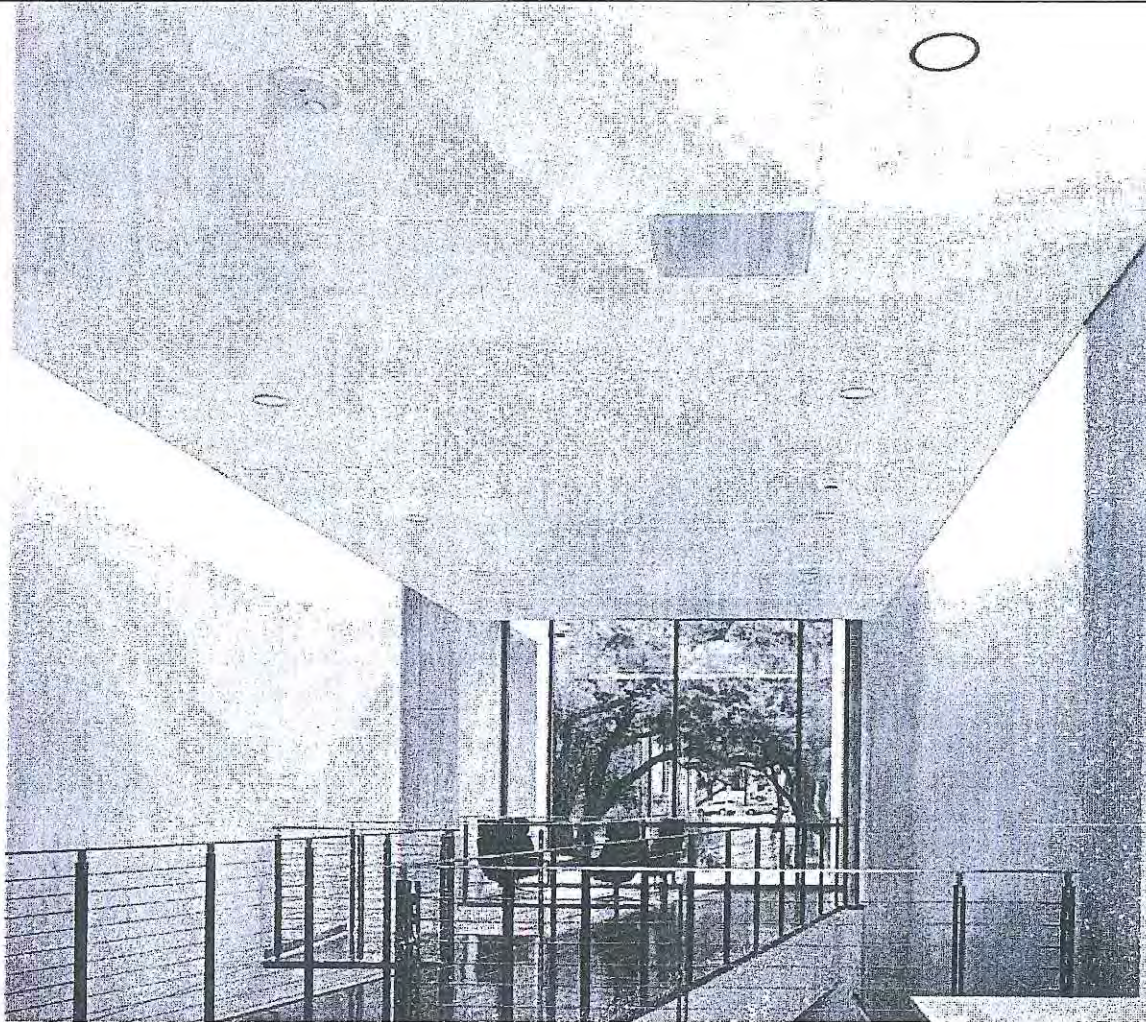
Description: 2.1 Metal Suspension System, 2.4 Inserts and Clips, 2.1 Acoustical Units

- ☒ **1. Reviewed/No Exceptions Taken (UON)**
- ☐ **2. Make Corrections Noted (Resubmittal Not Required)**
- ☐ **3. Revise as Noted and Resubmit**
- ☐ **4. Incomplete Submittal, Submit Missing Information**
- ☐ **5. Rejected, Resubmit as Specified**
- ☐ **6. Retained for A/E/Owner Record Only, without A/E Review**

Other Comments



**SUPRAFINE® XL® and ML &
SUPRAFINE XL High Recycled Content (HRC)
Blizzard White – Powder-coated Finish
9/16" Exposed Tee System**



Optima® Tegular 24" x 72" with Interlude® suspension system featuring Blizzard White powder-coated finish

NOW AVAILABLE – BLIZZARD WHITE POWDER-COATED FINISH

- Choose the new Blizzard White powder-coated finish for a clean, monolithic installed visual that looks great with Optima and Ultima® ceiling panels.

TechLine™ / 1 877 ARMSTRONG
1 877 276 7876



armstrong.com/suspensionsystem
BPCS-3077-1013

LEED® is a registered trademark of the U.S. Green Building Council
All other trademarks used herein are the property of AMI Licensing Company and/or its affiliates
© 2013 AMI Licensing Company • Printed in the United States of America

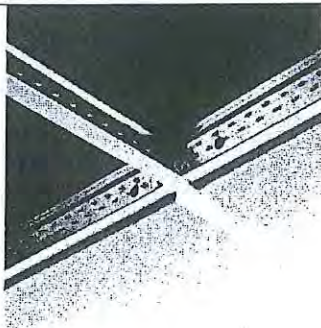


on 10 of 4

SUPRAFINE® XL® and ML & SUPRAFINE XL High Recycled Content (HRC) 9/16" Exposed Tee System



*LOCATION DEPENDENT



KEY SELECTION ATTRIBUTES

- Seismic Rx® Suspension System saves time and money; Armstrong offers an ICC-ES approach to installations (ESR-1308)
- PeakForm® profile increases strength and stability for improved performance during installation
- SuperLock™ main beam clip is engineered for a strong, secure connection and fast, accurate alignment confirmed with an audible click; easy to remove/relocate
- Hot dipped galvanized coating inhibits red rusting better than electrogalvanized or painted systems



- Cross tees available in ML and XL² (staked-on end detail); provides secure locked connection; easy to remove, reuse, and relocate
- Some items available in metric sizes
- 1-11/16" web height keeps components vertical and stable at light fixture interface
- 10-Year Limited System Warranty; 30-Year Limited Ceiling Systems Warranty when used with HumiGuard® Plus products
- FastSize™ main beams and cross tees can be ordered with special sizing and route spacing for your project needs in one carton minimums with two week lead times
- Fire Guard™ options offer UL design fire-rated performance

TYPICAL APPLICATIONS

- Offices
 - Hospitality
 - Healthcare
 - Education
 - Retail
- Blizzard White powder-coated finish coordinates with Optima® and Ultima® ceiling panels for a clean, seamless, monolithic installed visual.

VISUAL SELECTION

PERFORMANCE

PACKAGING

Item No.*	Face Profile	Description	Route Spacing	Dimensions (Inches)	Hanger Spacing* Lbs./Lin. Ft.	Fire Guard™	Seismic Category	Pcs./ Ctn.	Lin. Ft./ Ctn.
Suprafine XL and Suprafine XL High Recycled Content (Red Numbers are Fire Guard Items)					4 Ft. 5 Ft.	Dots represent high level of performance.			
7501_**	9/16"	12' HD Main Beam	6" O.C.	144 x 9/16 x 1-11/16"	16.86	10.62	• •	20	240
7501HRC							• •	20	240
8501							• •	20	240
7500_*	9/16"	12' ID Main Beam	6" O.C.	144 x 9/16 x 1-11/16"	12.75	5.74	• •	20	240
8500							• •	20	240
7502_*	9/16"	10' ID Main Beam	6" O.C.	120 x 9/16 x 1-11/16"	12.75	5.74	• •	20	200
XL7580_*	9/16"	8' Cross Tee	12" O.C.	96 x 9/16 x 1-11/16"	12.73**	—	• •	20	160
XL7590_*	9/16"	6' Cross Tee	12" O.C.	72 x 9/16 x 1-11/16"	12.73**	—	• •	20	120
XL7558_*	9/16"	5' Cross Tee	6", 20", 30"	60 x 9/16 x 1-11/16"	—	5.80	• •	60	300
XL7541HRC	9/16"	4' Cross Tee	—	48 x 9/16 x 1-11/16"	12.73	—	• •	60	240
XL7540_**	9/16"	4' Cross Tee	12" O.C.	48 x 9/16 x 1-11/16"	10.34	—	• •	60	240
XL8540							• •	60	240
XL7549_*	9/16"	4' Cross Tee	—	48 x 9/16 x 1-11/16"	16.42	—	• •	60	240
XL7530_*	9/16"	3' Cross Tee	—	36 x 9/16 x 1-11/16"	—	—	• •	60	180
XL7570_*	9/16"	30" Cross Tee	—	30 x 9/16 x 1-11/16"	28.67	—	• •	60	150
XL7520_**	9/16"	2' Cross Tee	—	24 x 9/16 x 1-11/16"	51.83	—	• •	60	120
XL7520HRC							• •	60	120
XL8520							• •	60	120
XL7510_*	9/16"	1' Cross Tee	—	12 x 9/16 x 1-11/16"	51.83	—	• •	120	120
FastSize™	9/16"	Main beams L: 36" - 144" / Cross tees L: 6" - 144" / Route spacing 3" from ends, 6" thereafter						Varies	Varies

* Simple Span

** Wire at 4'

• Items available in Standard, Premium, and Blizzard White powder-coated finish

♦ Items available in Blizzard White powder-coated finish only

When specifying or ordering items with a color or finish, add the two-letter suffix to the end of the item number (e.g., 7301HA - Haze)

ASTM Class
HD - Heavy-duty
ID - Intermediate-duty
LD - Light-duty



NOTE: Additional Suprafine XL items for TechZone Integrated Ceiling Systems are listed in the TechZone Technical Guide (BPCS-4486). Available online at armstrong.com/techzone

SUPRAFINE® XL® and ML & SUPRAFINE XL High Recycled Content 9/16" Exposed Tee System

VISUAL SELECTION

PERFORMANCE

PACKAGING

Item No.*	Face Profile	Description	Route Spacing	Dimensions (Inches)	Hanger Spacing* Lbs./Lin. Ft.	Fire Guard™	Seismic Category	Pcs./ Ctn.	Lin. Ft./ Ctn.
Suprafine XL items for TechZone™ Ceiling Systems					4 Ft. 5 Ft.				
□ 7504__*	9/16"	120" HD Main Beam	15", 42", 48", 75", 102", 108"	120 x 9/16 x 1-11/16"	12.75 10.62	—	•	20	200
□ 7505__*	9/16"	100" HD Main Beam	2", 26", 50", 74", and 98"	100 x 9/16 x 1-11/16"	—	—	•	20	166
□ 7507__*	9/16"	144" HD Main Beam	15", 36", 42", 63", 84", 90", 11", 132", 138"	144 x 9/16 x 1-11/16"	—	—	•	20	240
□ 7508__*	9/16"	132" HD Main Beam	10", 30", 50", 56", 76", 96", 116", 122"	132 x 9/16 x 1-11/16"	—	—	•	20	220
□ TZXL7556__*	9/16"	56" Cross Tee	—	56 x 9/16 x 1-11/16"	—	—	•	60	280
□ XL7564__*	9/16"	54" Cross Tee	6", 27", 48"	54 x 9/16 x 1-11/16"	—	—	•	60	270
□ XL7562__*	9/16"	42" Cross Tee	—	42 x 9/16 x 1-11/16"	12.34	—	•	60	210
□ XL7528__*	9/16"	28" Cross Tee	—	28 x 9/16 x 1-11/16"	—	—	•	60	140
□ XL7561__*	9/16"	21" Cross Tee	—	21 x 9/16 x 1-11/16"	—	—	•	60	105
□ XL7506__*	9/16"	6" Cross Tee	—	6 x 9/16 x 1-11/16"	—	—	•	240	120
Suprafine ML									
□ ML7540__*	9/16"	4" Cross Tee	—	48 x 9/16 x 1-11/16"	10.34	—	—	60	240
□ ML7520__*	9/16"	2" Cross Tee	—	24 x 9/16 x 1-11/16"	51.80	—	—	60	120





* Single Span
* Items available in Blizzard White powder-coated finish only
When specifying or ordering items with a color or finish, add the two-letter suffix to the end of the item number (e.g., 7301HA - Haze)

ASTM Class
HD - Heavy-duty
ID - Intermediate-duty
LD - Light-duty

Item No.	Description	Length	(A) Flange	(B) Flange	(C) Flange	Pcs./ Ctn.	Lin. Ft./ Ctn.
Suggested Wall Moldings and Shadow Moldings (Additional molding options available. See catalog pgs. 269-270)							
□ 7808__*	10' Hemmed Angle Molding	120"	2"	2"	—	10	100
□ 7804__*	12' Hemmed Angle Molding	144"	9/16"	7/8"	—	30	360
□ 7804HRC	12' Hemmed Angle Molding	144"	9/16"	7/8"	—	30	360
□ 7835	10' Channel Molding	120"	7/8"	1-3/4"	3/8"	20	200
□ 7873__*	10' Shadow Molding	120"	9/16"	15/16"	3/8"	30	300
□ 7874__*	10' Shadow Molding	120"	9/16"	15/16"	1/4"	30	300
□ 7876__***	10' Seismic Shadow Molding	120"	15/16"	15/16"	3/8"	30	300

*** Suitable for IBC Category D,E,F installations using Armstrong Seismic Rx® and BERC2 Clip

MAXIMUM FIXTURE WEIGHT

Configuration A	Item No.	Fixture A	Fixture B	Planning Module A	Planning Module B	Hanger Spacing A	Hanger Spacing B	Maximum Weight A	Maximum Weight B
Main Beam to Main Beam — Drawing Key: Main beam (↑) Cross tee (—) Hanger wire (✚)									
	8500/7500/7502 7501	24" x 48" 24" x 48"	24" x 48" 24" x 48"	48" x 48" 48" x 48"	48" x 48" 48" x 48"	48" 48"	48" 48"	73.36 lbs. 100 lbs.	57.07 lbs. 70.8 lbs.
	7500/7502 7501	12" x 48" 12" x 48"	12" x 48" 12" x 48"	48" x 48" 48" x 48"	48" x 48" 48" x 48"	48" 48"	48" 48"	88 lbs. 85 lbs.	44 lbs. 61 lbs.
Main beams tested as follows: 7500 tested at 12.7 lbs./lin. ft. to 1/360 of 4' span; 7501 tested at 16.86 lbs./lin. ft. to 1/360 of 4' span; 8500 tested at 13.3 lbs./lin. ft. to 1/360 of 4' span. 48" cross tee tested at 10.34 lbs./lin. ft. to 1/360 of 4' span.									
Cross Tee to Cross Tee — Drawing Key: Main beam (↑) Cross tee (—) Hanger wire (✚)									
	XL7540 XL7541 ML7540	24" x 48" 24" x 48" 24" x 48"	24" x 24" 24" x 24" 24" x 24"	48" x 48" 48" x 48" 48" x 48"	48" x 48" 48" x 48" 48" x 48"	48" 48" 48"	48" 48" 48"	55 lbs. 73 lbs. 65.71 lbs.	6 lbs. 84 lbs. 76 lbs.
	ML7540 XL7541	24" x 48" 24" x 48"	12" x 48" 12" x 48"	48" x 48" 48" x 48"	48" x 48" 48" x 48"	48" 48"	48" 48"	46 lbs. 52 lbs.	— —

Cross tees tested as follows: 48" cross tee tested at 10.34 lbs./lin. ft. to 1/360 of 4' span.
Fixtures weighing more than 56 lbs. should be independently supported. Light fixture clips are required at all fixture locations.
Fixture weight is based on single fixture only. For end-to-end fixtures or other configurations not shown, consult your Armstrong representative.
NOTE: The above data is based on 48" hanger wire spacing, board weight of 1 lb./sq. ft., maximum deflection of tees not to exceed 1/360 of the span, and suspension system installed in accordance with ASTM C636.
** To derive maximum lbs/sf, divide the on-center spacing of the component into the lbs/lf given in the load test data table.

SUPRAFINE® XL® and ML & SUPRAFINE XL High Recycled Content 9/16" Exposed Tee System

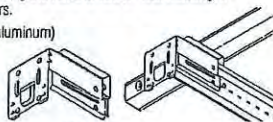
COLOR AND FINISH SELECTION



ACCESSORIES

BERC2 – 2" Beam End Retaining Clip – Allows you to create a code compliant Seismic D, E, F ceiling installation while eliminating the need to use 2" wall molding or spreader bars.

ALBERC2 (aluminum)



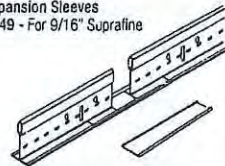
200 pcs/bucket

STAC – Single Tee Adapter Clip – Used to create code compliant non-seismic and seismic C and D, E, F off-module main beam to cross tee connections.



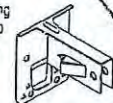
120 pcs/bucket

Expansion Sleeves
ES49 - For 9/16" Suprafine



200 pcs/bucket

GCWA – Grip Clip Wall Attachment – Joins main beam or cross tee to wall molding via locking bars without pop rivets or screws.



250 pcs/bucket

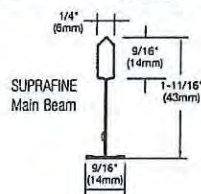
DETAILS



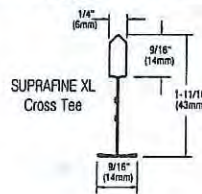
SUPRAFINE XL
Cross Tee



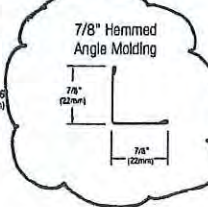
SUPRAFINE ML
Cross Tee



SUPRAFINE
Main Beam

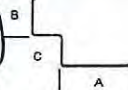


SUPRAFINE XL
Cross Tee



7/8" Hemmed
Angle Molding

Shadow Molding



SEISMIC PERFORMANCE

Main Beams

7501, 7501HRC, 7504, 7505, 7507
Minimum Lbs. To Pull Out Compression/Tension
335.0

Cross Tees

XL7558, XL7540, XL7549, XL7520, XL7510, XL8520,
XL7570, XL7590, XL7580, XL8540, XL7541, 753032,
752032, ML7540, ML7520

Minimum Lbs. To Pull Out Compression/Tension
352.0, 130.0

ICC Reports

For areas under ICC jurisdiction, see ICC evaluation report number ESR-1308 for allowable values and/or conditions of use concerning the suspension system components listed on this page. The report is subject to reexamination, revisions, and possible cancellation.

PHYSICAL DATA

Material

Hot dipped galvanized steel

Surface Finish

Baked polyester paint or powder coated

Face Dimension

9/16"

Profile

Exposed tee

Cross Tee/Main Beam Interface

XL – Override

ML – Flush fit

End Detail

Main Beam: Staked-on clip

XL Cross Tee: Staked-on clip

ML Cross Tee:

Staked-on hook clip

Duty Classification

Intermediate or Heavy-duty



Recycled
Content:
25%

Code Compliant Armstrong Seismic Rx™ Suspension Systems ICC-ESR-1308

Armstrong Seismic Rx Suspension System Saves Time and Money

IBC Category C:

- Easier to square the system by installing tight to adjacent walls
- Tighter, more secure installation
- Eliminate stabilizer bars

IBC Category D, E, F:

- Reduce material costs by using 7/8" molding
- Eliminate stabilizer bars
- Eliminate installation hassles from 2" wall molding

ICC-ES Recognizes the Armstrong Seismic Rx Suspension System as a Code Compliant Solution

The independent and expert evaluation and confirmation by ICC-ES provides the code official with proven evidence supporting the Armstrong Seismic Rx Suspension System as a code-compliant alternative design to current IBC requirements.

ESR-1308 Lists Specific Components and Method of Installation

The performance of the *Armstrong Seismic Rx Suspension System* is based on a specific combination of components and method of installation. *Other manufacturer's components and installation methods were not tested and are not covered in this evaluation. Substitution of other components puts the system at risk and is not allowed by this ESR report.*

Components

Select a component from each section (A, B and C).

A. Suspension Systems

- PRELUDE XL 15/16" Exposed Tee System
- PRELUDE XL Fire Guard 15/16" Exposed Tee System
- PRELUDE XL 15/16" Environmental Tee System
- SILHOUETTE XL 1/4" Reveal 9/16" Bolt Slot System
- SILHOUETTE XL 1/8" Reveal 9/16" Bolt Slot System
- SUPRAFINE XL 9/16" Exposed Tee System
- SUPRAFINE XL Fire Guard 9/16" Exposed Tee System
- AL PRELUDE PLUS XL 15/16" Environmental Tee System
- SONATA 9/16" Dimensional Tee System
- INTERLUDE XL 9/16" Dimensional Tee System
- SS PRELUDE PLUS XL 15/16" Environmental Tee System

Design Categories D, E and F

- ☐ Heavy-duty
- ☐ Heavy-duty
- ☐ Heavy-duty
- ☐ Heavy-duty
- ☐ Heavy-duty
- ☐ Heavy-duty
- ☐ Heavy-duty

Design Category C

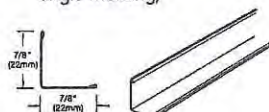
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty
- ☐ Intermediate-duty

ALL Design Categories

B. Wall Moldings:

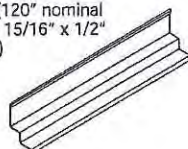
Hemmed (angle molding) with prefinished exposed flanges.

- ☒ 7800 (144" nominal 7/8" x 7/8" hemmed angle molding)
- ☐ 7802 (120" nominal 7/8" x 7/8" hemmed angle molding)
- ☐ 7803 (144" nominal 7/8" x 7/8" hemmed angle molding)
- ☐ 780036 (144" nominal 7/8" x 7/8" hemmed angle molding)
- ☐ HD7801 (120" nominal 7/8" x 7/8" hemmed angle molding)
- ☐ 7809 (144" nominal 15/16" x 15/16" hemmed angle molding)



Hemmed (shadow molding) with prefinished exposed flanges.

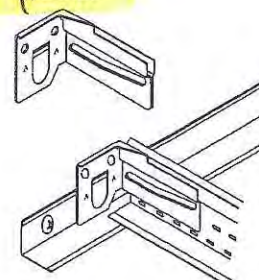
- ☐ 7823 (120" nominal 2" x 1-1/4" shadow molding, 3/4" reveal)
- ☐ 7873 (120" nominal 9/16" x 15/16" shadow molding, 3/8" reveal)
- ☐ 7874 (120" nominal 9/16" x 15/16" shadow molding, 1/4" reveal)
- ☐ 7875 (120" nominal 3/4" x 15/16" x 1/2" reveal)



C. Accessories:

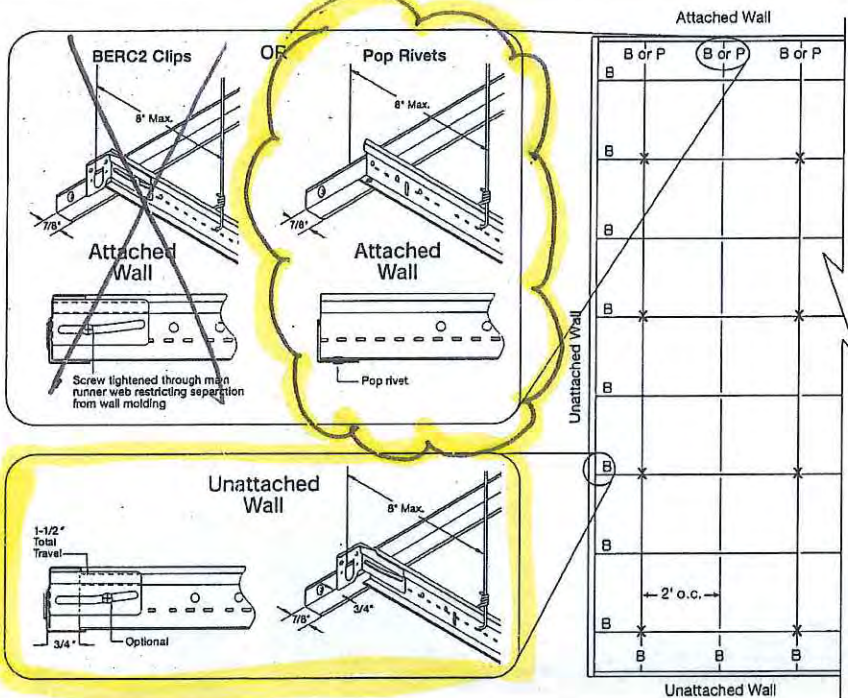
2" Beam End Retaining Clip Joins main beam or cross tee to wall molding and web of grid with no visible pop rivets.

☒ BERC2



Please visit
www.icc-es.org for a
copy of the ESR report.

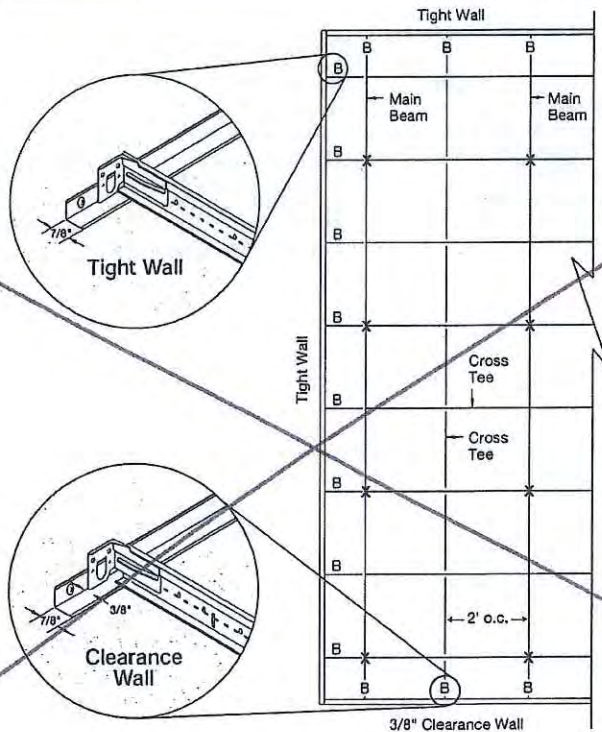
Armstrong Seismic Rx™ Suspension Systems Installation Details



Category D, E, F

- X Hanger Wire
- B BERC2 Clip
- P Pop Rivets

To download CAD drawing details
go to armstrong.com/seismic



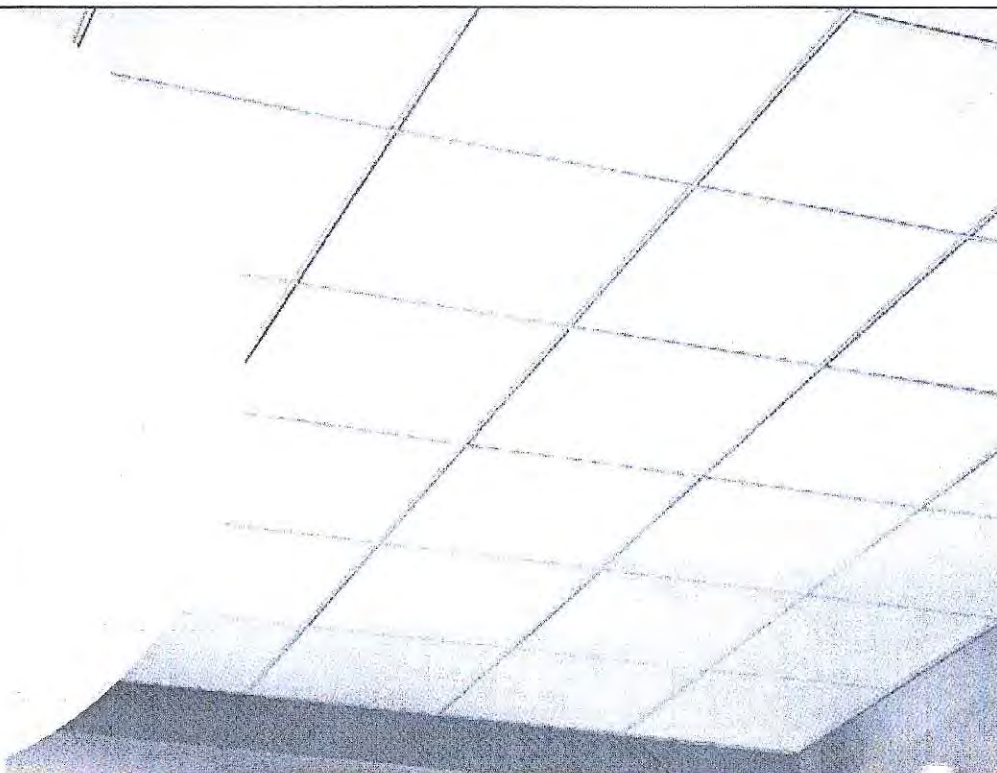
Category C

- X Hanger Wire
- B BERC2 Clip

To download CAD drawing details
go to armstrong.com/seismic

NOTE: For complete seismic installation
requirements contact TechLine at
877-ARMSTRONG

OPTIMA®
Tegular
fine texture



Optima Tegular 24" x 24" panels with Sonata® 9/16" suspension system (Pg. 265)

KEY SELECTION ATTRIBUTES

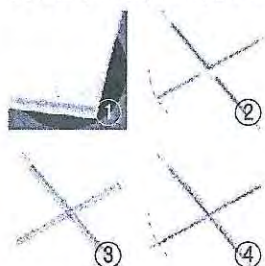
- Outstanding acoustical performance for open plan areas, both Articulation Class (180-200) and NRC (0.90-1.00)
- Smooth, clean, durable finish – Washable, Impact-resistant, Scratch-resistant, Soil-resistant
- Energy-saving high light-reflective finish
- Non-directional visual reduces installation time and scrap
- Items with PB suffix are manufactured with a plant-based binder
- Sag-resistant large size panels
- Compatible with TechZone™ Ceiling Systems (Pgs. 235-241)
- 30-Year Limited System Warranty against visible sag, mold/mildew, and bacterial growth

TYPICAL APPLICATIONS

- Open plan offices
- Computer rooms
- Corridors (walls-to-deck)
- Auditoriums
- Waiting rooms/nurses' stations – assists in addressing HIPAA and FGI acoustical requirements
- Areas with indirect lighting systems



DETAIL (Other Suspension Systems compatible. Refer to listing on page 200.)



1. Optima Square Tegular
2. Optima Tegular with Prelude® 15/16" suspension system
3. Optima Tegular with Interlude® XL® 9/16" suspension system
4. Optima Tegular with Silhouette® 9/16" suspension system with 1/8" reveal

COLOR



pg. 1 of 4

OPTIMA®
Tegular
fine texture



UP TO **71%** RECYCLED CONTENT

LEED®





































acoustics energy daylight & views indoor air quality renewable materials recycled content waste mgmt local materials

EPD AVAILABLE

Calculate LEED contribution at armstrong.com/greengenie *LOCATION DEPENDENT

VISUAL SELECTION

PERFORMANCE Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/ catdws	Item No.	Dimensions (Inches)		Acoustics		Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Durability				Primary (Embodied) Energy	Recycled Content*	Recycle Program	Warranty*
					NRC	CAC						Wash	Impact	Scratch	Soil				
OPTIMA Tegular					UL Classified		Inherent	Humi-Guard+					Below 11MJ/SF	Yes	No. of Years				
 15/16" Square Tegular	8	1402	6 x 48 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	1406	6 x 60 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3264	12 x 24 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3278	20 x 60 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	 3250 3250PB	24 x 24 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3354	24 x 24 x 1"		0.90	26	200	Class A	0.90	•	•	-	•	•	•	•	High	-	30
	8	3253	24 x 24 x 1-1/2"		1.00	N/A	200	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	 3252 3252PB	24 x 48 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3281	24 x 72 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3282	24 x 96 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3258	30 x 30 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	3286	30 x 60 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	 3255 3255PB	48 x 48 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	8	 FastSize™	W: 4" - 48" / L: 4" - 120" 1" Thick		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	-	High	•	30
8	Other Sizes	W: 4" - 36" / L: 4" - 120" W: 4" - 42" / L: 4" - 102" W: 4" - 48" / L: 4" - 90" 1-1/2" Thick		1.00	N/A	200	Class A	0.90	•	•	-	•	•	•	-	High	•	30	
 9/16" Square Tegular	26, 43, 47, 51, 55, 59	1410	4 x 48 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1411	4 x 60 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1412	6 x 6 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1413	6 x 12 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1415	6 x 42 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	 26, 43, 47, 51, 55, 59	1403	6 x 48 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1417	6 x 54 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	 26, 43, 47, 51, 55, 59	1407	6 x 60 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1409	6 x 96 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	3263	12 x 24 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	3290	12 x 48 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	1414	12 x 96 x 1"		0.90	N/A	180	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	3276	20 x 54 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30
	26, 43, 47, 51, 55, 59	3266	20 x 56 x 1"		0.95	N/A	190	Class A	0.90	•	•	-	•	•	•	•	High	•	30

pg. 2 of 4

\$\$\$

OPTIMA®

Tegular
fine texture



UP TO **71%** RECYCLED CONTENT

LEED®

acoustics

energy

daylight & views

indoor air quality

renewable materials

recycled content

waste mgmt

local materials











































EPD AVAILABLE

Calculate LEED contribution at armstrong.com/greengenie *LOCATION DEPENDENT

VISUAL SELECTION

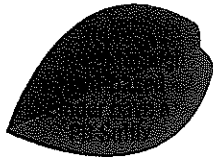
PERFORMANCE

Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/catdwgs	Item No.	Dimensions (Inches)																
				Acoustics		Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Durability				Primary (Embodied) Energy	Recycled Content*	Recycle Program	Warranty†	
NRC	CAC	AC	Inherent	Humid-Guard+	Wash						Impact	Scratch	Soil	Below 11MJ/SF					Yes
OPTIMA Tegular				UL Classified															
	26, 43, 47, 51, 55, 59	3277	20 x 60 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3279	21 x 24 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3251	24 x 24 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
		3251PB	24 x 24 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3355	24 x 24 x 1" 	0.90	26	200	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3254	24 x 24 x 1-1/2" 	1.00	N/A	200	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3280	24 x 42 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3257	24 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3257PB	24 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3265	24 x 60 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3265PB	24 x 60 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3261	24 x 72 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3261PB	24 x 72 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3262	24 x 96 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3262PB	24 x 96 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3283	27 x 30 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3268	28 x 30 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3269	28 x 60 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3259	30 x 30 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3284	30 x 54 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3289	30 x 56 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3285	30 x 60 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3287	42 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3288	44 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3256	48 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3256PB	48 x 48 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	3249	48 x 54 x 1" 	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	NEW FastSize™	W: 4" - 48" / L: 4" - 120" 1" Thick	0.95	N/A	190	Class A	0.90	•	•	•	•	•	•	•	High	•	30	
	26, 43, 47, 51, 55, 59	Other Sizes	W: 4" - 36" / L: 4" - 120" W: 4" - 42" / L: 4" - 102" W: 4" - 48" / L: 4" - 90" 1-1/2" Thick	1.00	N/A	200	Class A	0.90	•	•	•	•	•	•	•	High	•	30	

FIBERGLASS

OPTIMA® Tegular fine texture



UP TO **71%** RECYCLED CONTENT

LEED®

acoustics energy daylight & views indoor air quality renewable materials recycled content waste mgmt local materials

Calculate LEED contribution at armstrong.com/greengenie

EPD AVAILABLE

*LOCATION DEPENDENT

VISUAL SELECTION

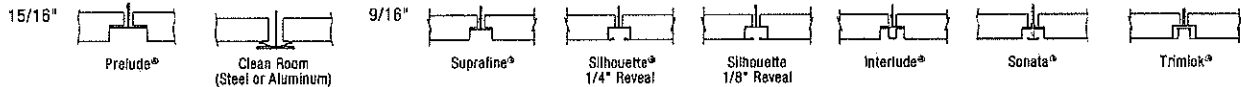
PERFORMANCE

Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/ catdwgs	Item No.	Dimensions (Inches)	Acoustics										Durability						Primary (Embedded) Energy	Recycled Content*	Recycle Program	Warranty†
				NRC	CAC	α _w	Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Water Repel	Wash	Scrub	Impact	Scratch	Soil						
OPTIMA Health Zone™				UL Classified	Humi-Inherent Guard+				Water Repel	Wash	Scrub	Impact	Scratch	Soil	Below 11 MJ/SF	Yes	No. of Years						
15/16" Square Tegular	8, 10	3214	24 x 24 x 1"	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				
	8, 10	3316	24 x 24 x 1-1/2"	0.95	29**	190	Class A	0.86	•	•	-	•	•	•	•	•	High	-	30				
	8, 10	3215	24 x 48 x 1"	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				
	8, 10	3317	24 x 48 x 1-1/2"	0.95	29**	190	Class A	0.86	•	•	-	•	•	•	•	•	High	-	30				
	8, 10	Other Sizes	W: 4" - 48" / L: 12" - 48" 1" Thick	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				
9/16" Square Tegular	26, 43, 47, 51, 55, 59	3216	24 x 24 x 1"	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				
	26, 43, 47, 51, 55, 59	3217	24 x 48 x 1"	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				
	26, 43, 47, 51, 55, 59	Other Sizes	W: 4" - 48" / L: 12" - 48" 1" Thick	0.95	N/A	190	Class A	0.86	•	•	-	•	•	•	•	•	High	•	30				

** CAC 29 achieved with Clean Room™ suspension system, not UL classified for acoustics.

SUSPENSION SYSTEMS



NEW! Blizzard White – Suspension System Finish

A color and texture coordinated suspension system to complement Optima ceiling panels for a monolithic look and feel.

- Available for:
1. Prelude® XL® and XL HRC
 2. Suprafine® ML, XL, and XL HRC
 3. Silhouette® XL 1/4" and 1/8" Reveal
 4. Interlude® XL HRC

ACCESSORIES (not included; ordered separately)

435 **Stabilizer Clip (3/4" x 1")**
Recommended for panels 60" and greater in length
Note: Panels 60" up to 96" – One clip near mid-point of each long edge.
Panels 96" and over – Two clips at 1/3 points of each long edge.

7870 **Spring Border Clip**
(For installations with the panel resting on the wall molding)

PHYSICAL DATA

Material
3316, 3317, 3354, 3355 – Fiberglass with DuraBrite® acoustically transparent membrane; CAC backing
All other items – Fiberglass with DuraBrite acoustically transparent membrane

Surface Finish
DuraBrite with factory-applied latex paint

Fire Performance
ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less. (UL labeled)

ASTM E1264 Classification
Type XII, Form 2, Pattern E
Fire Class A

Sag Resistance
HumiGuard® Plus – superior resistance to sagging in high humidity conditions up to, but not including, standing water and outdoor applications.

Anti Mold/Mildew & Bacteria
Fiberglass substrate is inherently resistant to the growth of mold, mildew, and bacteria.

VOC Emissions (PB Items only)
Third party certified compliant with California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010. This standard is the guideline for low emissions in LEED, CalGreen Title 24, ANSI/ASHRAE/USGBC/IES Standard 189; ANSI/GBI Green Building Assessment Protocol.

Primary (Embedded) Energy
See all LCA information on our EPD's.

High Recycled Content*

Contains greater than 50% total recycled content. Total recycled content based on product composition of post-consumer and pre-consumer (post-industrial) recycled content per FTC guidelines.

Acoustical Details
Some items have CAC backing. CAC backing may be available as a special order. A CAC value of 37 can be achieved by backloading fiberglass products with item 769 or 770.

Insulation Value
3253, 3254 –
R Factor – 6.0 (BTU units)
R Factor – 1.05 (Watts units)
3281, 3282 –
R Factor – 3.0 (BTU units)
R Factor – 0.53 (Watts units)
All other items –
R Factor – 4.0 (BTU units)
R Factor – 0.70 (Watts units)

30-Year Performance Guarantee & Warranty†
When installed with Armstrong Suspension System. Details at armstrong.com/warranty

Weight; Square Feet/Carton
1402, 1403 – 0.55 lbs/SF; 24 SF/ctn
1406, 1407 – 0.55 lbs/SF; 30 SF/ctn
1409, 3249, 3250, 3250PB, 3251, 3251PB, 3252, 3252PB, 3257, 3262, 3262PB, 3282 – 0.55 lbs/SF; 96 SF/ctn
1410 – 0.55 lbs/SF; 16 SF/ctn
1411 – 0.55 lbs/SF; 20 SF/ctn

1412 – 0.55 lbs/SF; 6 SF/ctn
1413 – 0.55 lbs/SF; 12 SF/ctn
1414, 3263, 3264, 3290 – 0.55 lbs/SF; 48 SF/ctn
1415 – 0.55 lbs/SF; 21 SF/ctn
1417 – 0.55 lbs/SF; 27 SF/ctn
3214 – 0.45 lbs/SF; 128 SF/ctn
3215, 3216, 3217 – 0.45 lbs/SF; 96 SF/ctn
3253, 3254 – 0.78 lbs/SF; 64 SF/ctn
3255, 3255PB, 3256, 3256PB – 0.55 lbs/SF; 128 SF/ctn
3258, 3259, 3276 – 0.55 lbs/SF; 75 SF/ctn
3261 – 0.55 lbs/SF; 72 SF/ctn
3265PB, 3277, 3278, 3285, 3286 – 0.55 lbs/SF; 100 SF/ctn
3288 – 0.55 lbs/SF; 62.22 SF/ctn
3289 – 0.55 lbs/SF; 70 SF/ctn
3269 – 0.55 lbs/SF; 93.33 SF/ctn
3279, 3280 – 0.55 lbs/SF; 84 SF/ctn
3281 – 0.55 lbs/SF; 72 SF/ctn
3283 – 0.55 lbs/SF; 67.5 SF/ctn
3284 – 0.55 lbs/SF; 90 SF/ctn
3287 – 0.55 lbs/SF; 112 SF/ctn
3288 – 0.55 lbs/SF; 117.33 SF/ctn
3316, 3317 – 0.75 lbs/SF; 64 SF/ctn
3354, 3355 – 0.57 lbs/SF; 96 SF/ctn

Minimum Order Quantity
1 carton

Metric Items Available
3250M, 3251M, 3252M, 3253M, 3254M, 3256M, 3257M, 3354M, 3355M – Metric items are subject to extended lead times and minimum quantities. Contact your representative for more details.



TechLine™ / 1 877 ARMSTRONG
armstrong.com/commerceinfo
(search: optima)
BPCS-4648-1213

LEED® is a registered trademark of the U.S. Green Building Council
All other trademarks used herein are the property of AIA Licensing Company and/or its affiliates. © 2013 AIA Licensing Company
Printed in the United States of America

Armstrong

200

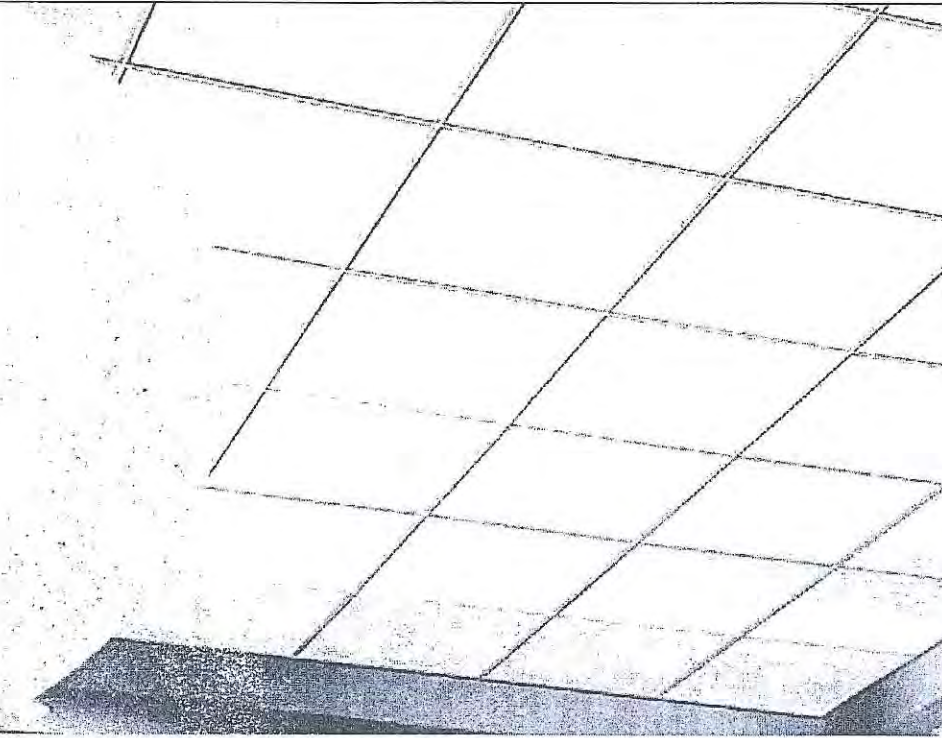
FIBERGLASS

ULTIMA®

Tegular
fine texture



Items 1911, 1912,
1914, 1915



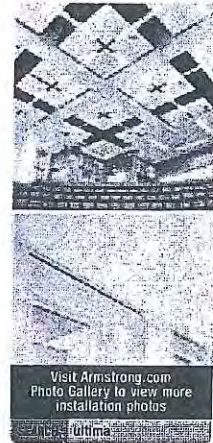
Ultima Beveled Tegular with Sonata® 9/16" suspension system (Pg. 265)

KEY SELECTION ATTRIBUTES

- Smooth, clean, durable finish – Washable, Impact-resistant, Scratch-resistant, Soil-resistant
- Scrubbable and water-repellent (Items 1936, 1937)
- Excellent sound absorption
- High CAC for excellent sound blocking – Items 1951, 1952
- Ceiling-2-Ceiling™ Post-consumer Recycled Content options: Items 1911HRC, 1912HRC, 1914HRC, 1915HRC. 65% Pre-consumer; 15% Post-consumer
- 88% Biobased content (see page 331)
- Available with AirGuard™ Coating
- Visual coordinates with Optima® for mixed (open/closed plan) applications
- Items 1912 and 1936 available on Create!™ colors and images – see pages 163-165
- Non-directional visual reduces installation time and scrap
- Compatible with the TechZone™ Ceiling Systems
- Meets USDA/FSIS guidelines for use in food processing areas (Items 1936 and 1937)
- 30-Year Limited System Warranty against visible sag (excludes Items 1905 and 1929), mold/mildew, and bacterial growth

TYPICAL APPLICATIONS

- Offices
- Healthcare – assists in addressing HIPAA and FGI acoustical requirements
- Classrooms
- Corridors
- Lobbies/reception areas
- Department stores/retail
- Areas requiring frequent plenum access
- Areas with indirect lighting systems
- Kitchens, dining rooms, and food preparation areas (Items 1936 and 1937)



DETAIL (Other Suspension Systems compatible. Refer to listing on page 228.)



1. Ultima Beveled Tegular
2. Ultima Health Zone™ Beveled Tegular
3. Ultima with Suprafine® 9/16" suspension system
4. Ultima with Silhouette® XL® 9/16" suspension system with 1/4" reveal

COLOR



White

Create! colors available
on Items 1912, 1936.
See pages 165-167.

ULTIMA®

Tegular
fine texture

HRC items contain 15%
or greater post-consumer
recycled ceilings



UP TO **81%** RECYCLED
CONTENT
LEED®

EPD
AVAILABLE

Calculate LEED contribution at armstrong.com/greengenie

*LOCATION DEPENDENT

\$\$\$

VISUAL SELECTION

PERFORMANCE

Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/calcdwg	Item No.	Dimensions (Inches)	Acoustics	Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Water Repel	Wash	Scrub	Impact	Scratch	Soil	Primary (Embedded) Energy	Recycled Content*	Recycle Program	Warranty*
				NRC	Class	Light	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Water Repel	Wash	Scrub	Impact	Scratch	Soil	Below 11MJ/SF	High	Yes	No. of Years
ULTIMA Tegular				UL Classified	Class A	0.90	•	•	•	•	•	•	•	•	•	•	•	•	•
15/16" Beveled Tegular		1422	6 x 48 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1917	12 x 24 x 3/4"	N/A	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1993	12 x 48 x 3/4"	0.65	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1994	12 x 60 x 3/4"	0.65	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1995	12 x 72 x 3/4"	0.65	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1911	24 x 24 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1911HRC**	24 x 24 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1951	24 x 24 x 3/4"	0.80	40 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1894	24 x 24 x 3/4"	0.60	40 Fire Guard	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1914	24 x 48 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1914HRC**	24 x 48 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1985	24 x 60 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		1981	24 x 72 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
		FastSize™	W: 12" - 30" / L: 18" - 72" 3/4" thick	0.60	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
ULTIMA Tegular with AirGuard™ Coating																			
15/16" Beveled Tegular	31-34, 54	1901	24 x 24 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30
	31-34, 54	1904	24 x 48 x 3/4"	0.70	35 Class A	0.90	•	•	•	•	•	•	•	•	•	•	High	•	30

** Other sizes are not available for HRC items

MINERAL FIBER

\$\$\$

ULTIMA®

Regular
fine texture

HRC items contain 15%
or greater post-consumer
recycled ceilings



UP TO 81% RECYCLED
CONTENT

LEED®

EPD
AVAILABLE

Calculate LEED contribution at armstrong.com/greengenie

*LOCATION DEPENDENT

VISUAL SELECTION

PERFORMANCE Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/caldwgs	Item No.	Dimensions (Inches)	Acoustics	Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Durability	Primary (Embodied) Energy	Recycled Content*	Recycle Program	Warranty†
				UL Classified	BioBlock+Guard+	Humi-Repel	Water Wash	Scrub	Impact	Scratch	Soil	Below 11MJ/SF	Yes	No. of Years
ULTIMA Regular														
9/16" Beveled Regular	29, 43, 47, 51, 55, 59	1423	6 x 48 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1427	6 x 60 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1916	12 x 24 x 3/4"	N/A	N/A	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1996	12 x 48 x 3/4"	0.65	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1937	12 x 60 x 3/4"	0.65	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1998	12 x 72 x 3/4"	0.65	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1912	24 x 24 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1912HRC**	24 x 24 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1952	24 x 24 x 3/4"	0.60	40	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1895	24 x 24 x 3/4"	0.60	40	Fire Guard	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1915	24 x 48 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1915HRC**	24 x 48 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1986	24 x 60 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1982	24 x 72 x 3/4"	0.70	35	Class A	0.90	•	•	•	•	•	•	30
	29, 43, 47, 51, 55, 59	1905	30 x 30 x 3/4"	0.70	35	Class A	0.90	•	Std	•	•	•	•	1
	29, 43, 47, 51, 55, 59	1929	30 x 54 x 3/4"	0.70	35	Class A	0.90	•	Std	•	•	•	•	1
	29, 43, 47, 51, 55, 59	FastSize™	W: 12" - 30" / L: 18" - 72" 3/4" Thick	0.70	35	Class A	0.90	•	•	•	•	•	•	30

** Other sizes not available for HRC items.

MINERAL FIBER

ULTIMA®

Tegular

fine texture

UP TO 81% RECYCLED CONTENT

LEED®

EPD AVAILABLE



Calculate LEED contribution at armstrong.com/greengenie

*LOCATION DEPENDENT

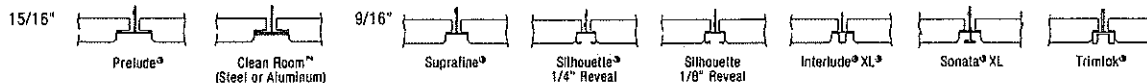
VISUAL SELECTION

PERFORMANCE

Dots represent high level of performance.

Edge Profile	Susp. Dwg. Pgs. 273-277 armstrong.com/ catdwgs	Item No.	Dimensions (Inches)	Acoustics										Durability										Recycle Program	Warranty*
				NRC	CAC	Fire Rating	Light Reflect	Anti-Mold & Mildew	Sag Resist	Certified Low VOC Emissions	Water Repel	Wash	Scrub	Impact	Scratch	Soil	Primary (Embodied) Energy	Recycled Content*							
ULTIMA Tegular with AirGuard™ Coating				UL Classified	BioGlock+			Humi-Guard+		Water Repel	Wash	Scrub	Impact	Scratch	Soil	Below 11MJ/SF	High	Yes	30-Year						
9/16" Beveled Tegular	29, 43, 47, 51, 55, 59	1902	24 x 24 x 3/4"	0.70	35	Class A	0.90	•	•	•	-	•	-	•	•	•	•	High	•	30					
	29, 43, 47, 51, 55, 59	1906	24 x 48 x 3/4"	0.70	35	Class A	0.90	•	•	•	-	•	-	•	•	•	•	High	•	30					
ULTIMA Health Zone™																									
15/16" Beveled Tegular	15, 16	1937	24 x 24 x 3/4"	0.70	35	Class A	0.86	•	•	•	•	•	-	•	•	•	•	High	•	30					
9/16" Beveled Tegular	15, 16	1936	24 x 24 x 3/4"	0.70	35	Class A	0.86	•	•	•	•	•	-	•	•	•	•	High	•	30					

SUSPENSION SYSTEMS



Item 1912-CAC 33 on Interlude, Sonata, Suprafine

PHYSICAL DATA

Material
Wet-formed mineral fiber with DuraBrite® acoustically transparent membrane. 1936, 1937 – Wet-formed mineral fiber with DuraBrite acoustically transparent water-repellant membrane.

Surface Finish
DuraBrite with factory-applied latex paint

Fire Performance
ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less. (UL labeled) Fire Guard™: A fire resistive ceiling when used in applicable UL assemblies

ASTM E1264 Classification
Type IV, Form 2, Pattern E
Fire Class A

Sag Resistance
HumiGuard® Plus – superior resistance to sagging in high humidity conditions up to, but not including, standing water and outdoor applications. (Excludes items 1905 and 1929).

Anti-Mold/Mildew & Bacteria
BioBlock® Plus contains an anti-microbial treatment and provides guaranteed resistance against growth of mold/mildew and Gram-positive and Gram-negative odor/stain-causing bacteria for 30 years.

VOC Emissions
Third party certified compliant with California Department of Public Health CDPH/ELB/Standard Method Version 1.1, 2010. This standard is the guideline for low emissions in LEED, CalGreen Title 24, ANSI/ASHRAE/USGBC/IES Standard 189; ANSI/GBI Green Building Assessment Protocol.

Primary (Embodied) Energy
See all LCA information on our EPD's.

High Recycled Content*
Contains greater than 50% total recycled content. Total recycled content based on product composition of post-consumer and pre-consumer (post-industrial) recycled content per FTC guidelines.

Insulation Value
R Factor – 2.2 (BTU units)
R Factor – 0.39 (Watts units)

30-Year Performance Guarantee & Warranty*
When installed with Armstrong Suspension System. Details at armstrong.com/warranty

Cleaning Recommendations (Items 1936, 1937 only)
To clean panel, use a clean, white cloth with water or a mild detergent and wipe surface. To disinfect panel, lightly spray surface and wipe clean with a clean, white cloth. Acceptable colorless disinfectants include:
• Sodium hypochlorite • Hydrogen peroxide
• Quaternary ammonium

Weight; Square Feet/ Carton
1905 – 1.05 lbs/SF; 62.5 SF/ctn
1911, 1912, 1914, 1915 – 1.05 lbs/SF; 48 SF/ctn
1916, 1917, 1993, 1996 – 1.05 lbs/SF; 24 SF/ctn
1936, 1937 – 1.08 lbs/SF; 48 SF/ctn
1422, 1423 – 1.08 lbs/SF; 24 SF/ctn
1427 – 1.07 lbs/SF; 24 SF/ctn
1929 – 1.02 lbs/SF; 68 SF/ctn
1951, 1952 – 1.31 lbs/SF; 48 SF/ctn
1901, 1902, 1904, 1906 – 1.08 lbs/SF; 48 SF/ctn
1994, 1997 – 1.05 lbs/SF; 30 SF/ctn
1995, 1998 – 1.05 lbs/SF; 36 SF/ctn

Minimum Order Quantity
1 carton

Metric Items Available
1905M, 1912M, 1912MHRC, 1914M, 1915M, 1916M, 1917M, 1951M – Metric items are subject to extended lead times and minimum quantities. Contact your representative for more details.

TechLine™ / 1 877 ARMSTRONG
armstrong.com/commercialceilings
(search: ultima)
BPCS-3039-413

LEED® is a registered trademark of the U.S. Green Building Council
All other trademarks used herein are the property of AIA Licensing Company and/or its affiliates. © 2013 AIA Licensing Company
Printed in the United States of America

Armstrong



228

~ 4 of 4

MINERAL FIBER

PAS - FACE DEFLECTOR VARIANTS

<div>Model: PAS</div>			
MODULE SIZE:	24X24	BORDER:	3 - LAY-IN
FINISH:	26 - WHITE	DAMPER MODEL:	0 - NONE
ACCESSORY 1:	NONE	ACCESSORY 2:	NONE
ACCESSORY 3:	NONE		

Qty	DIM 1	DIM 2
	NECK SIZE	NECK SIZE
		NONE

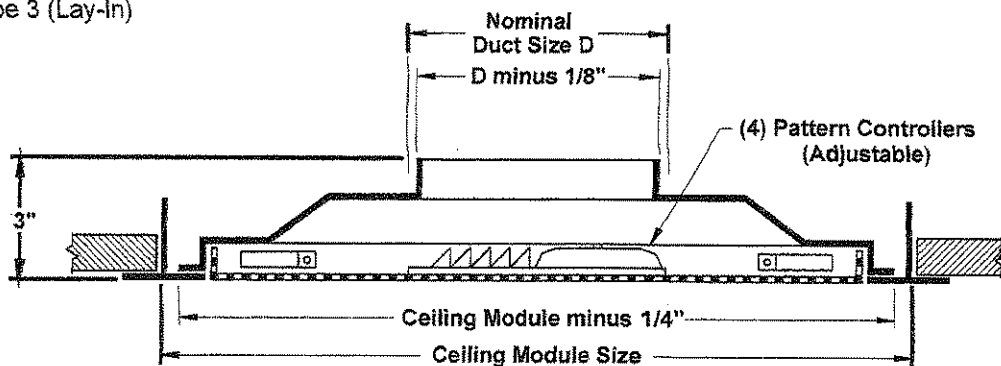
CSD1

PAS • Supply • 1, 2, 3, or 4 Way Adjustable Discharge Pattern

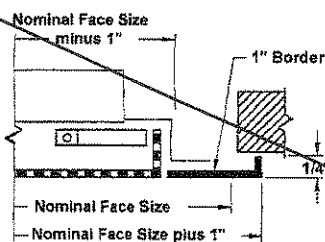
TAG: CSD1

Perforated Ceiling Diffusers
Steel • Flush Face

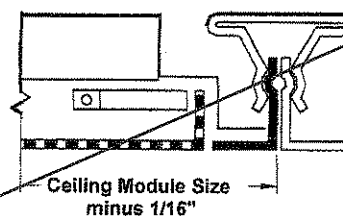
☒ Border Type 3 (Lay-In)



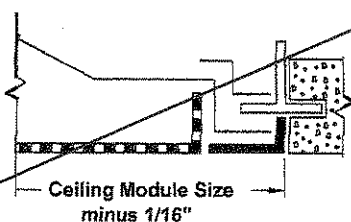
☐ Border Type 1 (Surface Mount)



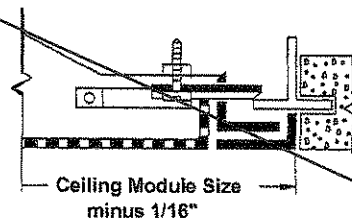
☐ Border Type 2 (Snap-In)



☐ Border Type 4 (Spline)



☐ Border Type 4SL (Spline Side Lock)



Note: 4SL can be installed after ceiling tiles are in place.

Available Sizes for Border Types 1, 2, 3, 4, 4SL

Face or Ceiling Module Size	Nominal Duct Size D													
	6 x 6	8 x 8	10 x 10	12 x 12	15 x 15	18 x 18	18 x 6	6" Dia.	8" Dia.	10" Dia.	12" Dia.	14" Dia.	16" Dia.	
12 x 12	*							*						
24 x 12	*						*	*						
16 x 16	*	*						*	*	*				
20 x 20	*	*	*					*	*	*	*	*		
24 x 24	*	*	*	*	*	*		*	*	*	*	*	*	
48 x 24	*	*	*	*				*	*	*	*	*	*	

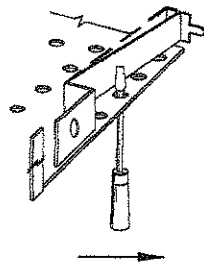
* Indicates available combination

All dimensions are in inches.

Removing Perforated Face

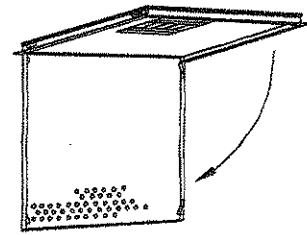
1. Insert small Screwdriver or other slim instrument to push latch inward from border.

2. Repeat on opposite side.



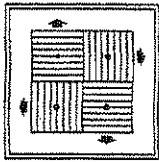
3. Face will now swing down with 2 remaining latches acting as hinges.

For complete removal, release 2 remaining latches at left.

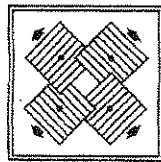


Adjusting Pattern Controllers

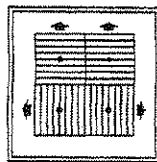
4-Way



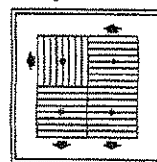
4-Way Corner



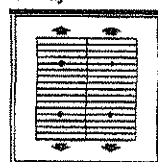
3-Way



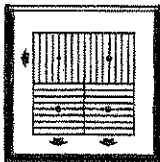
3-Way



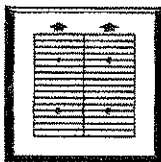
2-Way



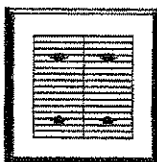
2-Way Corner



1-Way



Vertical



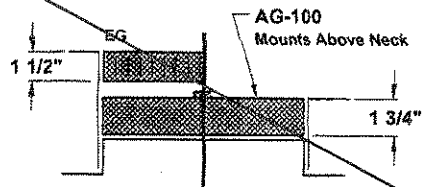
Vertical



Accessories (Optional) for Round Neck

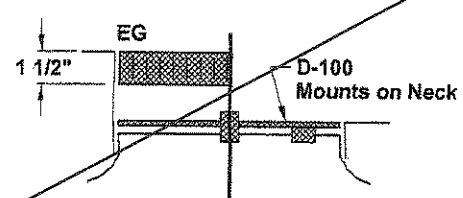
Check ☒ if provided.

- ☐ Model AG-100 Radial Sliding Blade Damper
- ☐ Model EG Equalizing Grid



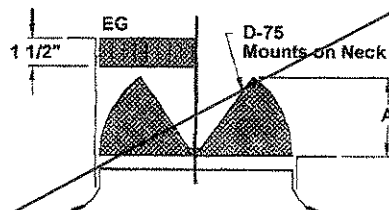
Model AG-100 damper is available in duct sizes 6 thru 14 inches only.

- ☐ Model D-100 Radial Sliding Blade Damper
- ☐ Model EG Equalizing Grid



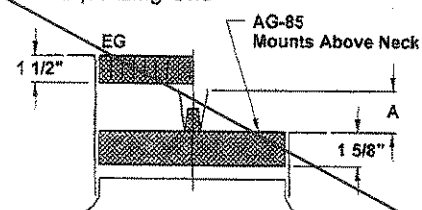
Model D-100 damper is available in duct sizes 6 thru 14 inches only.

- ☐ Model D-75 Opposed Blade Damper
- ☐ Model EG Equalizing Grid

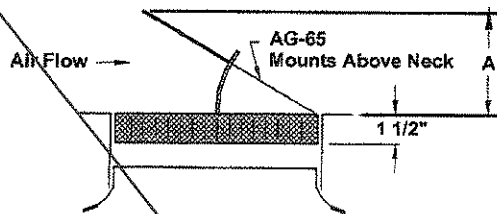
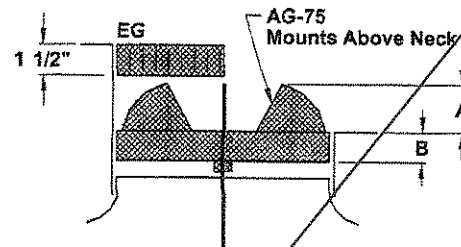


Model D-75 damper is available in duct sizes 6 thru 12 inches only.

- ☐ Model AG-85 Butterfly Damper
- ☐ Model EG Equalizing Grid



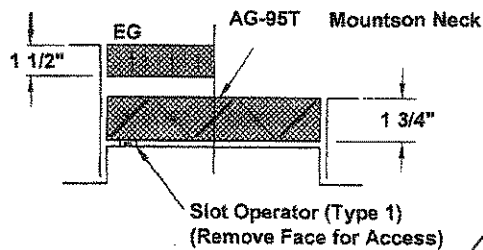
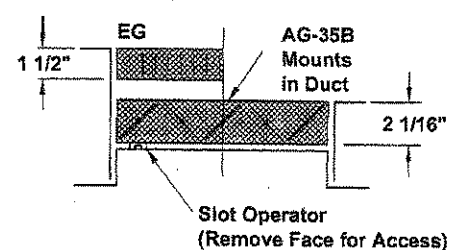
Accessories (Optional) for Round Neck

Check ☒ if provided.☐ Model AG-65 Combination Damper and Equalizing Grid☐ Model AG-75 Opposed Blade Damper☐ Model EG Equalizing Grid

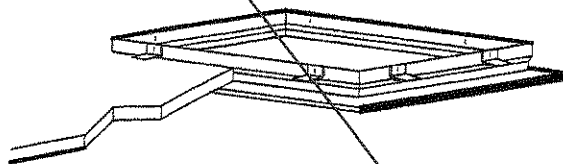
Accessories	Nominal Round Duct Sizes					
	6	8	10	12	14	16
AG-100	—	—	—	—	—	N/A
D-100	—	—	—	—	—	N/A
D-75	2 3/8	3 1/4	4 1/8	4 7/8	N/A	N/A
AG-85	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2
AG-65	3 3/8	4 1/2	5 1/2	7 1/8	8 5/8	9 7/8
AG-75	4 1/4	5 1/8	6	6 7/8	2 3/4	3 1/2

Note: Model AG-100 and D-100 dampers have radial blades that slide in a horizontal plane. For that reason, no opening clearance "A" is dimensioned.

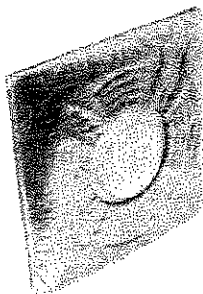
Accessories (Optional) for Rectangular Neck

Check ☒ if provided.☐ Model AG-95 Opposed Blade Damper☐ Model EG Equalizing Grid☐ Model AG-35B Opposed Blade Damper☐ Model EG Equalizing Grid☐ TRM TITUS Rapid Mount Frame

For Surface Mounting Border Type 3



Accessories (Optional) for Rectangular and Round Neck

Check ☒ if provided.☐ IB Molded Insulation Blanket

Insulation is R-6 where blanket has the most depth. One-inch clearance on each side of neck is left for insulated duct connection. 24 x 24-inch module size only. Blanket is factory installed.

Standard Finish: #26 White

General Description

- Excellent performance in variable air volume systems.
- A tight, uniform horizontal blanket of air protects the ceiling against smudging.
- Discharge pattern can be adjusted to vertical as well as to 1, 2, 3 or 4 way horizontal. Can be adjusted before or after installation.
- Discharge pattern is adjusted by dropping the perforated face (see Page 2) and rotating the pattern controllers.
- Dropping the perforated face also gives access for adjusting the optional dampers.
- Perforated face has 3/16" diameter holes on 1/4" staggered centers.
- Inlet collar is approximately 1½" deep to allow easy duct connection.
- Material is heavy gauge steel.

This submittal is meant to demonstrate general dimensions of this product. The drawings are not meant to detail every aspect of the product. Drawings are not to scale. Titus reserves the right to make changes without written notice.



605 Shiloh Road • Plano, Texas 75074 • 972-212-4800

All rights reserved. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage retrieval system without permission in writing from Air Distribution Technologies

Job Name: VAPA DIALYSIS - AIR OUTLETS

PERFORATED RETURNS

Model: PAR

MODULE SIZE: 24X24
FINISH: 26 - WHITE
ACCESSORY 1: NONE
ACCESSORY 3: NONE

BORDER: 3 - LAY-IN
DAMPER MODEL: 0 - NONE
ACCESSORY 2: NONE

Qty	DIM 1 NECK SIZE	DIM 2 NECK SIZE
		NONE

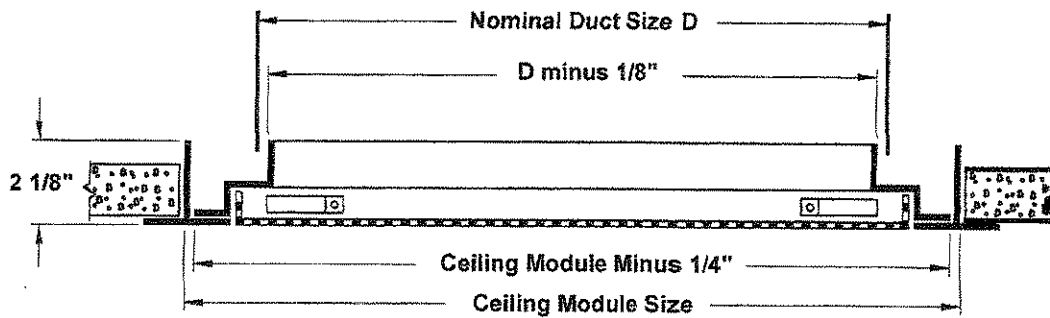
CRR1,EXH1

PAR • Return

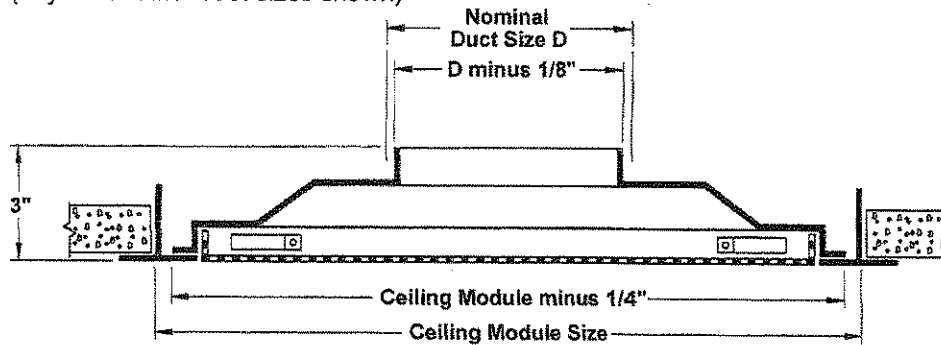
Perforated Ceiling Diffusers
Steel • Flush Face

TAG: CRR1,EXH1

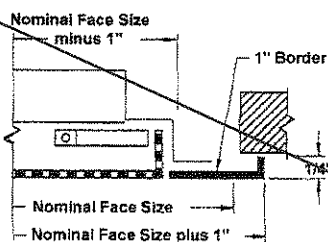
☒ Border Type 3 (Lay-In when D=Module size -2)



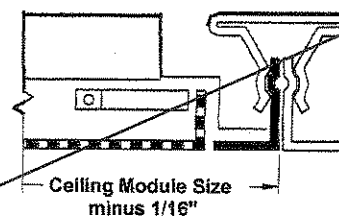
☒ Border Type 3 (Lay-In for other duct sizes shown)



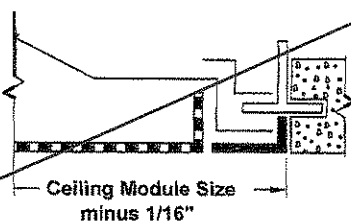
☒ Border Type 1 (Surface Mount)



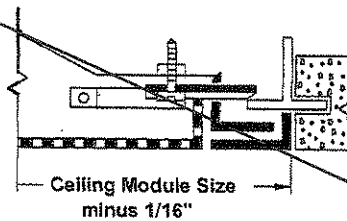
☒ Border Type 2 (Snap-In)



☒ Border Type 4 (Spline)



☒ Border Type 4SL (Spline Side Lock)



Note: 4SL can be installed after ceiling tiles are in place.

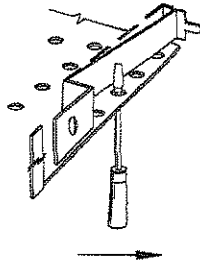
Available Sizes for Border Types 1, 2, 3, 4, 4SL																		
Face or Ceiling Module Size	Nominal Duct Size D																	
	6 x 6	8 x 8	10 x 10	12 x 12	14 x 14	16 x 16	18 x 18	22 x 10	22 x 22	46 x 22	6" Dia.	8" Dia.	10" Dia.	12" Dia.	14" Dia.	16" Dia.		
12 x 12	*		*								*							
24 x 12	*						*		*		*							
16 x 16	*	*			*						*	*	*					
20 x 20	*	*	*				*				*	*	*	*	*			
24 x 24	*	*	*	*	*	*	*		*		*	*	*	*	*	*		
48 x 24	*	*	*	*		*				*	*	*	*	*	*	*		

* Indicates available combination.

Removing Perforated Face

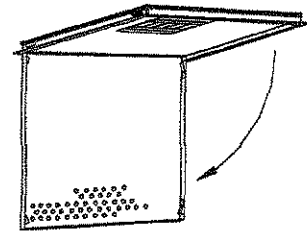
1. Insert small Screwdriver or other slim instrument to push latch inward from border.

2. Repeat on opposite side.



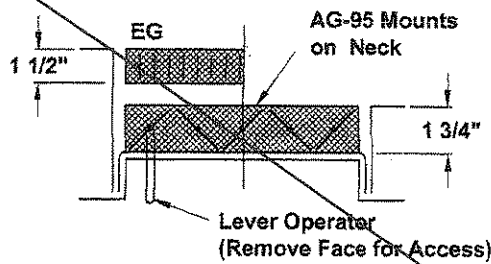
3. Face will now swing down with 2 remaining latches acting as hinges.

For complete removal, release 2 remaining latches at left.

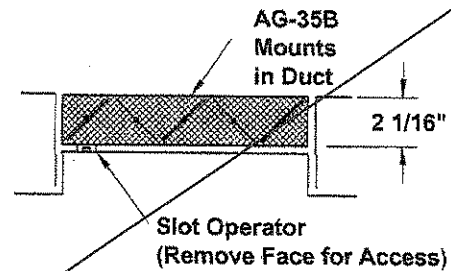


Accessories (Optional) Check ☒ if provided.

☐ Model AG-95 Opposed Blade Damper

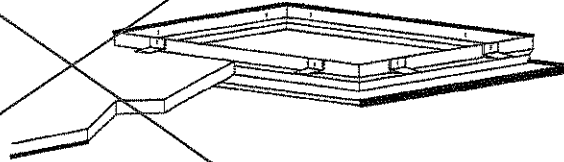


☐ Model AG-35B Opposed Blade Damper

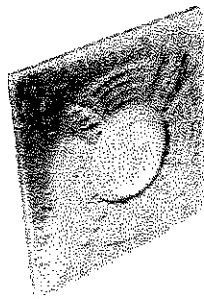


☐ TRM TITUS Rapid Mount Frame

For Surface Mounting Border Type 3



☐ IB Molded Insulation Blanket



Insulation is R-6 where blanket has the most depth. One-inch clearance on each side of neck is left for insulated duct connection. 24 x 24-inch module size only. Blanket is factory installed.